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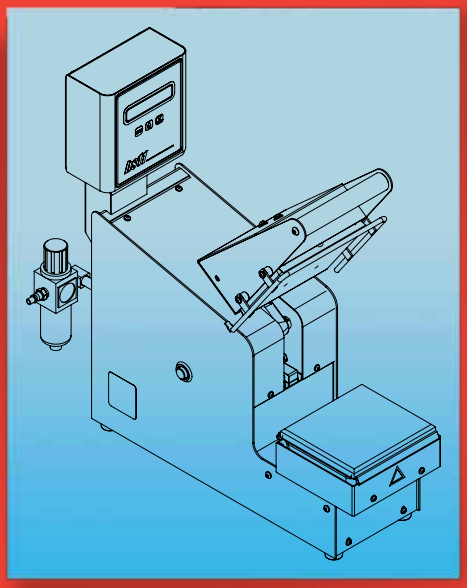
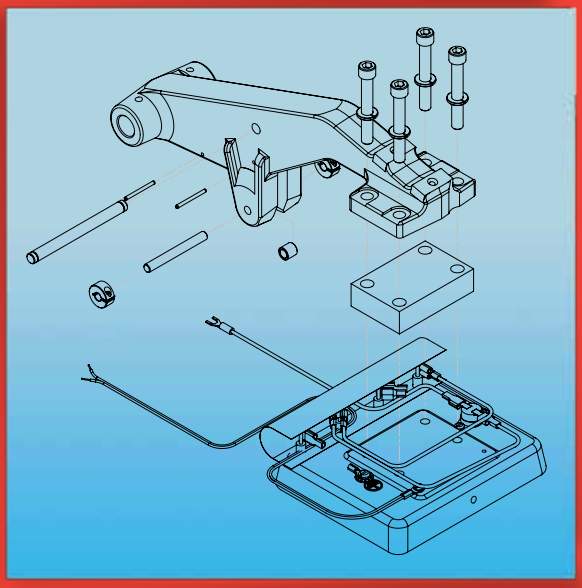
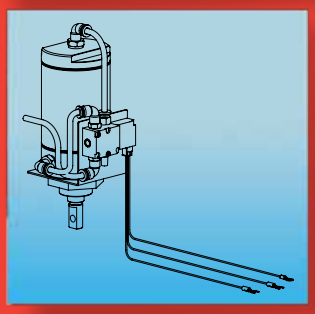
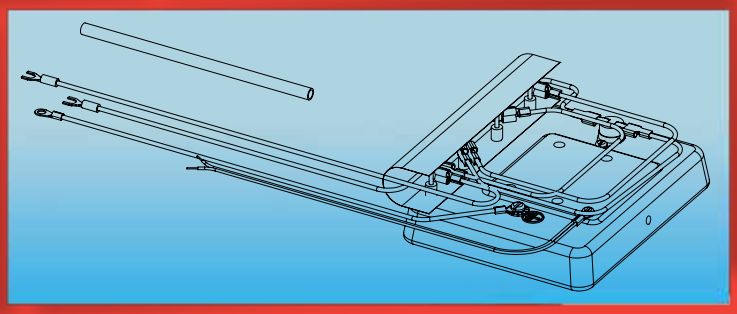
HS11 Manual









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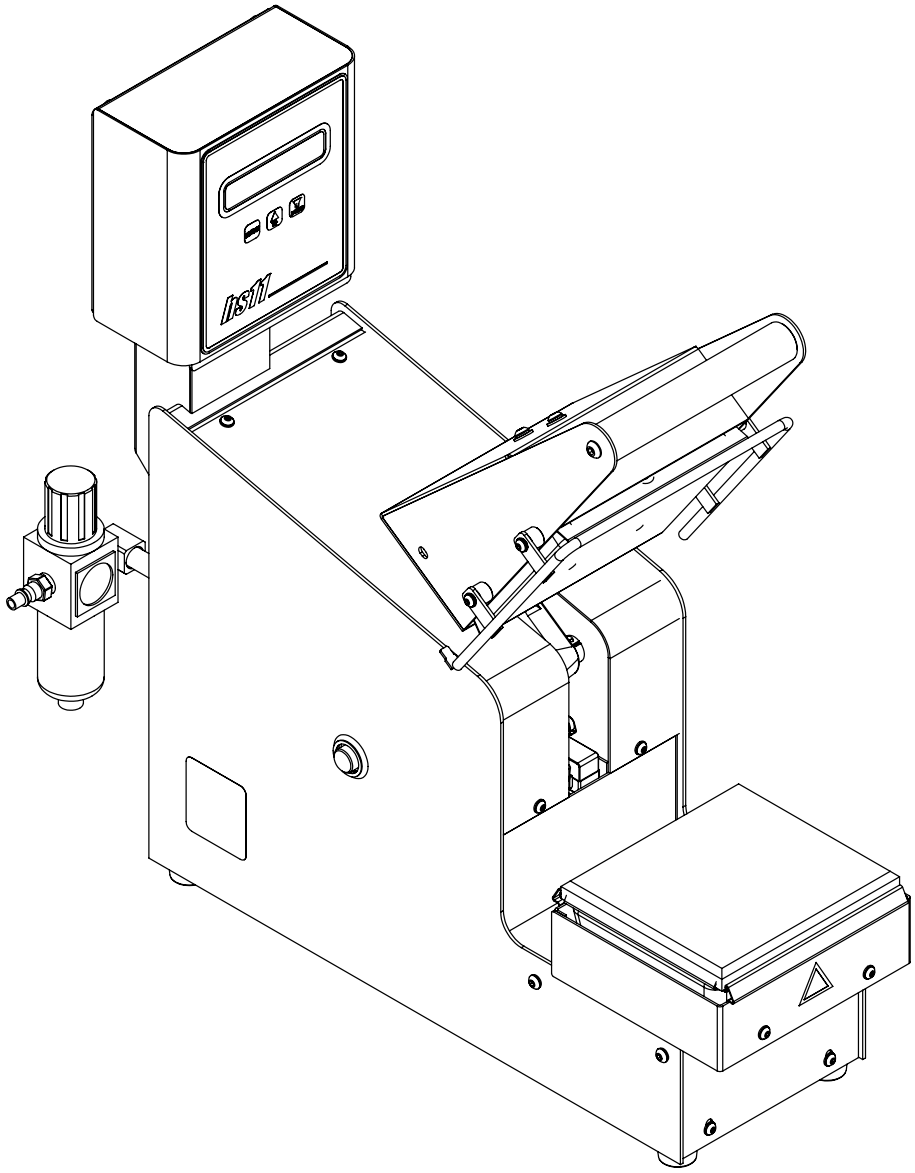
Operation & Service Manual



MODEL HS11
HEAT-SEAL MACHINE
WITH ELECTRONIC HEAT CONTROLS AND LCD DISPLAY

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Warranty

Thermopatch Corporation, Syracuse, New York ("Seller") warrants this product to be free from defects in material and workmanship under normal use and service. Any part which proves to be defective in material or workmanship within one (1) year of the date of original purchase for use will be repaired or replaced, at Seller's option, free of service or labor charges, with a new or functionally operative part. Seller's liability under the Warranty shall be limited to repairing or replacing at its own factory or through an authorized service distributor or dealer, material which is determined by Seller to have been defective in manufacture and upon which a claim has been made by the original purchaser or user to Seller (or an authorized distributor or dealer) within the warranty period. Claims under this Warranty will be honored only upon written approval by an authorized officer of Seller. Approved return of parts or products will be on a prepaid transportation charges basis only. Claims under this Warranty will be honored only upon Seller's determination that the claim is covered by this Warranty, and Seller shall incur no obligation under this Warranty prior to such determination. This Warranty does not apply: (1) To any machinery or equipment which has been altered or repaired, except by Seller or its authorized representatives, or (2) to any machinery or equipment which has been subject to misuse, negligence, or accident, including, without limitation, use and operation of such machinery or equipment while parts are loose, broken, out of order, or damaged by the elements. Parts replaced under this Warranty are warranted only through the remainder of the original Warranty. Any and all claims for warranty service must include such information as Seller designates, and shall include specifically the serial number of each unit (if appropriate).

The foregoing shall constitute the sole and exclusive remedy of any using purchaser and the sole and exclusive liability of Seller in connection with this product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS AND ALL OTHER OBLIGATIONS OR LIABILITIES OF SELLER, INCLUDING ANY TORT LIABILITY, FOR NEGLIGENT DESIGN OR MANUFACTURE OF THIS PRODUCT, OR OTHERWISE. It is expressly agreed that Buyer shall not be entitled to recover any incidental or consequential damages, as those terms are defined in the Uniform Commercial Code, and that Buyer shall have no right of rejection or of revocation of acceptance of any part or of revocation of acceptance of any part or all of the goods covered hereby.

EC Declaration of Conformity for Machinery
(According to Annex II A of the Machinery Directive)

We,

Thermopatch B.V.
Draaibrugweg 14
1332 Almere

The Netherlands

herewith declare, on our own responsibility, that the machinery:
heat seal machine **Thermopatch HS-11**
which this declaration refers to, is in accordance with the conditions of the following Directive(s):

2006/42/EG (Machinery directive)

2004/108/EG (EMC directive)

The Netherlands, Almere, 29-09-2009

Jan Bausch,
Director

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Section 1

INTRODUCTION TO THE HS11

The HS11 is designed as a heavy-duty heat-seal machine for applying patches, emblems, hot paper transfers, and identification tapes.

The sealing cycle is initiated by hand, which causes the sealing head to lower.

Temperature, time, and sealing pressure can all be individually adjusted as required for the particular materials being sealed. Upper and lower platen temperatures can be set independently in Fahrenheit or Celsius. A new LCD screen with 3-button interface simplifies machine operation.

The machine develops 24 PSI inter-platen pressure with the standard 5” x 6” platens. Two optional smaller platens are available for even higher inter-platen pressure.

SAFETY INFORMATION

Each HS11 is equipped with a safety-lock feature for the protection of the operator. The pneumatic sealing cycle will not start until the upper sealing plate is within 5/32” (4mm) of the lower sealing platen. If an obstruction is met before this point, the sealing cycle will not occur. THE SAFETY LOCK FEATURE IS PRESET AND SHOULD NOT BE TAMPERED WITH.

In addition to the safety lock feature, there is a touch guard around the upper heater platen. Should any obstruction contact the touch guard, the machine will become inoperative. An error message will appear on the LCD screen, see Alarm Display Screens, page 3-6.

CLEAN MACHINE PARTS WITH NON-FLAMMABLE CLEANING FLUIDS ONLY!

CAUTION: WORKING AIR PRESSURE MUST NOT EXCEED 70 PSI (4.8 BAR)! AIR SUPPLY SHOULD NOT BE CONTAMINATED WITH DIRT, OIL, OR WATER.

The electrical system is three-wire and fully grounded. THIS THREE-WIRE ELECTRICAL POWER CORD AND PLUG MUST ALWAYS BE USED WITH A PROPERLY GROUNDED OUTLET.

WARNING: THE SEALING IRONS MAY REACH TEMPERATURES AS HIGH AS 450°F(232°C) DURING NORMAL OPERATION. APPROPRIATE CARE SHOULD BE TAKEN TO PREVENT SKIN BURNS. ALWAYS KEEP HANDS CLEAR OF THE SEALING IRONS AND TOUCH GUARDS WHEN OPERATING MACHINE!

Two back-up high limit thermostats prevent the temperature of either sealing iron from rising above 500°F (260°C) in case either heat control malfunctions.

Before operating, make sure all covers are in place, and keep loose jewelry and clothing clear of machine during operation.

Before servicing machine, unplug electrical power cord, disconnect air supply, and let sealing irons cool.

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MACHINE SPECIFICATIONS

Electrical requirements	: 10 amp @ 110 VAC, 50/60 Hz or 5.0 amp @ 220 VAC, 50/60 Hz	
Maximum operating air pressure	: 70 PSI	(4.8 Bar)
Time settings	: 1.0 – 30 seconds	
Heat range	: 150°-450°F	(66° - 232°C)
Shipping weight	: 65 lbs	(29.5 kg)
Length (open)	: 20″	(51 cm)
(closed)	: 23″	(58 cm)
Height (open)	: 21″	(53 cm)
(closed)	: 21″	(53 cm)
Width	: 8″	(20 cm)
Sealing iron size	: 5″ x 6″	(13 x 15 cm)
Sealing pad size (standard)	: 5″ x 6″	(13 x 15 cm)*
(optional)	: 2″ x 4″	(5 x 10 cm)*
(optional)	: 1-3/16″ x 4″	(3 x 10 cm)*
Pedestal (optional)	: 32″	(81 cm) high
Garment tray (optional)	: 17″ x 25″	(43 x 64 cm)

*See page 11 for inter-platen pressure.

OPERATING SPECIFICATIONS

Temperature

The HS11 heat-sealing machine will require approximately 10-15 minutes for the temperature to stabilize. Check the digital readout for upper and lower platen temperatures.

CAUTION: NEVER EXCEED 450°F (232°C), THE MAXIMUM SEALING IRON TEMPERATURE!

Sealing temperatures have been preset to : 425°F (218°C) upper iron
375°F (191°C) lower iron

Time

Heat-sealing cycle time is factory set to 10.0 seconds. The sealing time can be changed as required to apply or remove a label.

Sealing Pressure

Sealing pressure is factory-preset at 60 PSI (4.1 Bar).

CAUTION: NEVER EXCEED 70 PSI (4.8 Bar), THE MAXIMUM OPERATING PRESSURE!

To adjust time or temperature settings, press the MODE key, and follow page 3-5, “Menu Screens”. To adjust sealing pressure, see page 3-1 “Operating Instructions”.

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Section 2

INSTALLATION AND SET-UP

Worktable Mounting

1. Set the machine on the worktable in desired location.
2. Draw a pencil line on the table at the front edge of the machine, near the center.
3. Move the machine out of the way and measure back 2” (5 cm) from the pencil line.
4. Drill a 9/32-inch (7 mm) diameter hole for a sheet metal table, or 3/16-inch (5 mm) diameter hole for a wood table.
5. Mount the wood screw or shoulder bolt (supplied).
6. Reposition the machine so the keyhole slot in the bottom cover (at the front) drops over the head of the screw.
7. Push the machine back slightly. (Note: The purpose of this screw is to prevent the machine from bouncing or moving across the table.)

Pedestal Mounting (optional)

Mount per separate instructions included with the pedestal.

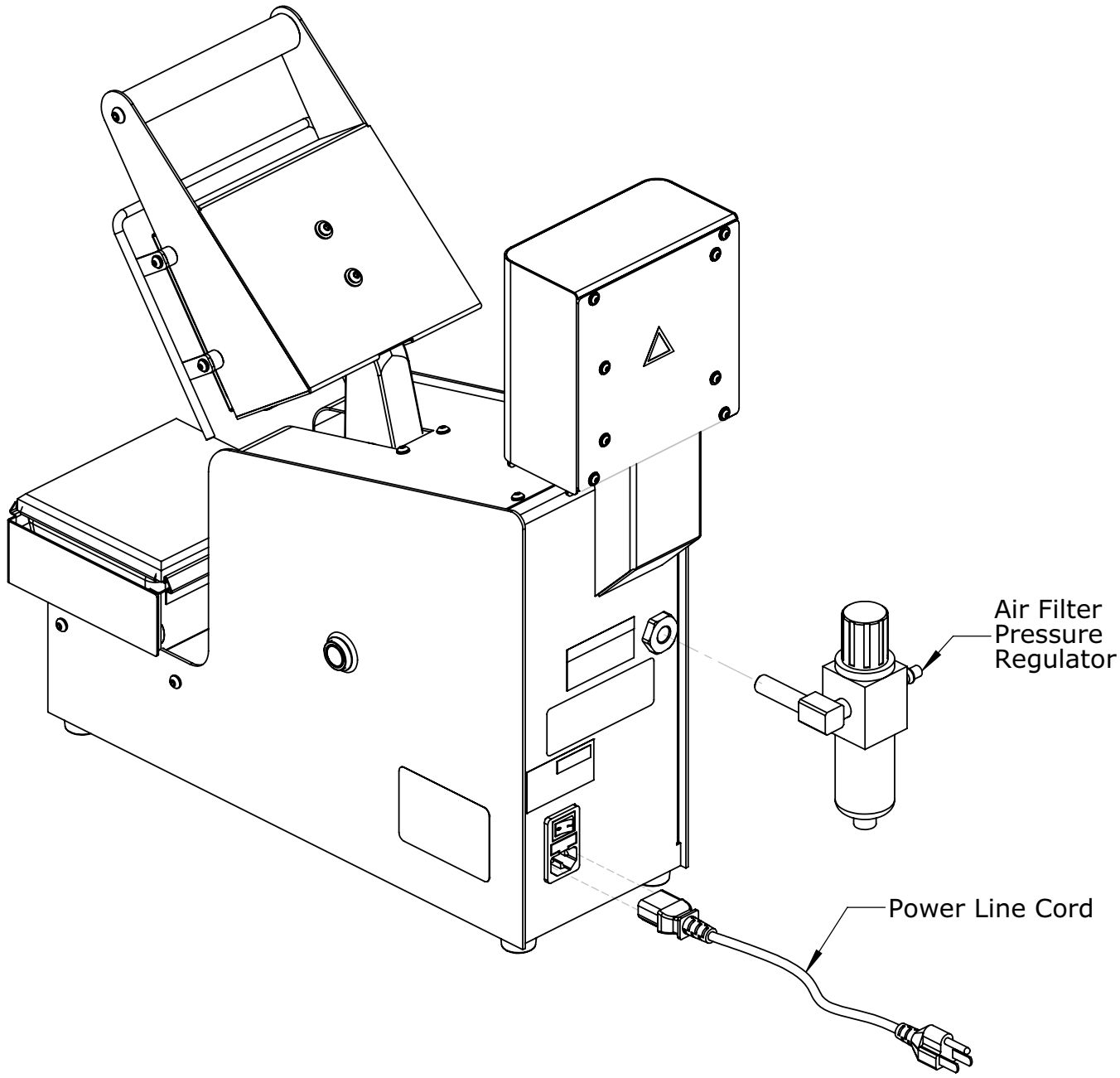
Garment Tray (optional)

The garment tray can be mounted so it is either level with the rubber platen, or reversed so it is about 5” (13 cm) below.

1. Remove two screws from each side of the machine.
2. Place the garment tray in the desired position and attach with the four screws.

Completing the Installation

1. Attach filter assembly to air inlet at rear of machine. Use pipe thread sealant or tape.
2. Hand-tighten or tighten lightly with a pipe wrench on the short piece of pipe between the machine and air filter.
3. Plug the electrical power cord into a properly grounded outlet of the correct voltage/amperage rating.


Air Filter
Pressure
Regulator
Power Line Cord

Section 3

MACHINE OPERATION

Operating Instructions

1. Turn the "Power" switch to ON. The amber light on the switch will light indicating power is being supplied. Allow approximately 10-15 minutes for the temperature to stabilize.
2. Adjust upper and lower sealing temperatures as needed, see page 3-5 "Menu Screens–Screen2, 3".

WARNING: THE HEATED PLATENS MAY REACH TEMPERATURES AS HIGH AS 450°F (232°C) DURING NORMAL OPERATION. APPROPRIATE CARE SHOULD BE TAKEN TO PREVENT SKIN BURNS. ALWAYS KEEP HANDS CLEAR OF THE HEATER PLATENS AND TOUCH GUARD WHEN OPERATING MACHINE!

3. Adjust pressure as needed. Turn the large black knob clockwise to increase pressure, counterclockwise to decrease. Check air gauge and repeat as needed.

   DO NOT EXCEED 70 PSI!

To Apply a Patch or Emblem (non-embroidered):

1. Set the sealing time to desired period by pressing the up or down keypads to the proper setting (see page 3-5 "Menu Screens – Screen 4").
2. Center the work piece over the lower sealing pad.
3. Place the patch, emblem, etc. over the work piece with the adhesive side toward the fabric.
4. When hands are clear of the touch guard, grasp the upper sealing head handle and lower the sealing head.
5. As soon as the upper iron comes all the way down to the lower platen, release.

The upper iron will automatically stay down to complete sealing. The digital display will show elapsed time for the sealing cycle. When it reaches the set seal time, the upper iron will automatically return to the upright position.

CAUTION: FOR BEST RESULTS, SEALED MATERIAL SHOULD BE HANDLED CAREFULLY UNTIL IT HAS COOLED TO ROOM TEMPERATURE.

To Remove a Patch or Emblem:

1. Set the sealing time to the desired period by pressing up or down on the keypads (see page 3-5 "Menu Screens – Screen 4").
2. Place the work piece on the pad so the patch is centered.
3. Lower the upper platen until the sealing cycle begins.
4. When the upper iron releases, quickly peel the patch or emblem off the surface of the work piece.

5. If the patch cools before it is removed, repeat the procedure.

CAUTION: USE EXTREME CARE IN HANDLING THE FABRIC. IT WILL BE VERY HOT!

Applying Embroidered Emblems

Embroidered emblems and emblems with embroidered borders (also called Merrowed borders) are a special case and usually should be sealed as follows:

See Section 5 "Maintenance" to remove the Teflon shield from the upper platen and to remove the sponge rubber pad from the lower platen.

1. Mount the Teflon shield to the lower platen and the sponge rubber pad to the upper platen.
2. Readjust the temperatures so that the lower platen is at 410°F (210°C) and the upper platen is at 375°F (191°C).
3. Set pressure at 60 PSI (4.1 Bar) for the 5" x 6" (13 cm x 15 cm) platen.
4. Set at 12 seconds. This can be varied between 10 seconds (for light fabrics) and 14 seconds (for heavy fabrics), see page 3-5 "Menu Screens – Screen 4".
5. Follow procedure for non-embroidered emblems, see above.

Note: For very thick garments, it may be necessary to increase the time setting even higher, since it is very difficult to get the heat through the garment.

SEALING PADS

Part No.	42477 (Standard)	42515 (Optional)	42516 (Optional)
Size	5” x 6” (13 cm x 15 cm)	4” x 2” (10 cm x 5 cm)	4” x 1-3/16” (10 cm x 3 cm)
Material	Silicone sponge rubber	Silicone sponge rubber (firm)	Silicone hard rubber (solid)
Use For:	Applying mending patches, emblems, hot paper transfers and label tapes to garments and linens	Applying smaller-sized heat-seal products, or for higher sealing pressure than standard platen	Smallest size applications, spot sealing, applying labels to confined areas of garments, such as between trouser belt loops, where extremely high inter-platen pressure is required

Gauge Air Pressure PSI (Bar)	INTER-PLATEN PRESSURE					
	42477		42515		42516	
	PSI	(Kg/cm^2)	PSI	(Kg/cm^2)	PSI	(Kg/cm^2)
15 (1.0)	5	(0.4)	19	(1.3)	32	(2.3)
20 (1.4)	7	(0.5)	26	(1.8)	43	(3.0)
25 (1.7)	8	(0.6)	32	(2.2)	54	(3.8)
30 (2.1)	10	(0.7)	38	(2.7)	64	(4.5)
35 (2.4)	12	(0.8)	45	(3.1)	75	(5.3)
40 (2.8)	14	(1.0)	51	(3.6)	86	(6.0)
45 (3.1)	15	(1.1)	57	(4.0)	97	(6.8)
50 (3.4)	17	(1.2)	64	(4.5)	107	(7.5)
55 (3.8)	19	(1.3)	70	(4.9)	118	(8.3)
60 (4.1)	20	(1.4)	76	(5.4)	129	(9.1)
65 (4.5)	22	(1.6)	83	(5.8)	140	(9.8)
70 (4.8)	24	(1.7)	89	(6.3)	150	(10.6)

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START-UP SCREENS

The HS11 heat-sealing machine is equipped with a LCD display. When power is switched on to the machine, the following start-up screens will be visible:

Screen 1:

THERMOPATCH
ALLIGATOR

Screen 1 is the first screen to appear when power is switched on.

Screen 2:

TOUCH GUARD TEST
RING=123 WIRE=456

Screen 2 appears while the machine self-tests the touch guard. Actual numbers may be different. If the touch guard is activated, the following screen will appear. The start-up process will continue when the touch guard is cleared.

ENSURE TOUCH GUARD
IS CLEAR #####

Screen 3:

PERFORMING SELF TEST
PLEASE WAIT

Screen 3 appears while the machine self-checks its circuits.

Screen 4:

HEATING PLEASE WAIT
UPPER 410F LOWER 375F

(A)

OR

UNIT READY FOR
PRODUCTION

(B)

Screen 4(A) appears while the upper and lower heat platens are being heated to the default or user-set Fahrenheit temperatures. If the user changes the temperature scale to Celsius during heating, the temperatures will be displayed in degrees Celsius (e.g. 105C). Screen 4(B) appears if the machine is turned on while the platens are at the default temperature.

Screen 5:

UPPER=410F TIME=10.0
LOWER=375F DC=123456

Screen 5 appears after the heat platens reach the default or user-set temperatures. The machine is now ready to seal. The upper and lower temperatures are shown at left, the time and daily count (DC) at the right. To change any of these values, see the following section “Menu Screens”.

MENU SCREENS

The default settings in the HS11 heat-sealing machine can be changed as required.

To advance a menu screen, press the MODE key. To change the value or select an option, press the up or down key. If no button is pressed for 8 seconds, the machine will exit the menu.

The following menu screens will appear in sequence:

Screen 1 (select temperature scale):

F/C SELECT SET=F

UP=C DN=F MODE=NEXT

Screen 1 appears when the MODE key is first pressed. The current temperature scale is indicated in the upper right as an "F", for Fahrenheit (default), or "C", for Celsius. Press the UP key to change to Celsius. Press the DOWN key to change to Fahrenheit. To advance to Screen 2, press the MODE key.

Screen 2 (set upper platen temperature):

SET UPPER TEMP=410F

UP=+ DN=- MODE=NEXT

Screen 2 appears when the MODE key is pressed as described above. The upper platen temperature is displayed in the upper right, in the temperature scale chosen at Screen 1. Press the UP key to raise and the DOWN key to lower temperature. The temperature can be changed in 2°F or 1°C increments.

To advance to Screen 3, press the MODE key.

Screen 3 (set lower platen temperature):

SET LOWER TEMP=375F

UP=+ DN=- MODE=NEXT

Screen 3 operates like Screen 2, setting the temperature for the lower platen. The lower platen temperature is displayed in the upper right (shown is the default, 375°F). The temperature can be changed in 2°F or 1°C increments.

To advance to Screen 4, press the MODE key.

CAUTION: DO NOT EXCEED 450°F (232°C) AT EITHER PLATEN!

Screen 4 (set seal time):

SET SEAL TIME=10.0

UP=+ DN=- MODE=NEXT

Screen 4 appears when the MODE key is pressed at Screen 3. The seal time is shown in the upper right hand corner (shown is the default, 10.0 seconds). The seal time can be changed in 0.1 second increments from 1.0 to 30.0 seconds. Press the UP key to increase and the DOWN key to decrease seal time.

To advance to Screen 5, press the MODE key.

Screen 5 (reset daily count):

DAILY COUNT=123456

DN=RESET MODE=NEXT

Screen 5 appears when the MODE key is pressed at Screen 4. The daily counter, displayed at upper right, is the number of seals since the counter was last reset. To reset the counter, press the DOWN key, then the MODE key to advance to Screen 6.

To continue without resetting the counter, simply press MODE to advance to Screen 6.

Screen 6 (information and exit):

TOTAL COUNT=12345678

PRESS MODE TO EXIT

Screen 6 appears when the MODE key is pressed at Screen 5. This screen displays the total seal count, and is for information only. The total seal count cannot be changed.

Press the MODE key to exit and resume machine operation.

ERROR SCREENS

The following screens represent error messages shown in the digital display. Each screen is followed by an explanation of the error, and the appropriate action to take.

Touch Guard Errors

TOUCH GUARD ACTIVE

PRESS ANY BUTTON

The touch guard has been activated by contact. Keep hands clear of touch guard, and press any key to resume operation.

TOUCH GUARD WIRE

BROKEN-NOT FUNCTIONAL

There is a fault in the touch guard wire. This prevents the machine from operating without the touch guard safety feature. This message will continue to appear until the wire is fixed. Turn off the machine, and repair the wire before operating.

ENSURE TOUCH GUARD

IS CLEAR #####

The touch guard was activated during startup. The startup sequence continues normally once the touch guard is cleared.

Hook Seal Errors

NO HOOK SEAL RELEASE
HOOKSEAL OR SOLENOID

The hook seal switch did not release within 4 seconds after elapsed seal time. The seal made is counted, and the switch should release the upper sealing arm automatically. This message indicates a possible failure of the solenoid that controls the hook seal switch.

LOST HOOK SEAL SWITCH
PLEASE TRY AGAIN

The hook seal switch lost contact before the seal cycle was completed. The cycle is not counted. The sealing arm reset automatically. Wait for the arm to reset, and try the seal again.

Heater and Temperature Errors

UPPER HEATER FAILURE
PRESS ANY KEY

LOWER HEATER FAILURE
PRESS ANY KEY

The heater did not reach the set temperature in 20 minutes. Press any key. Try to set a lower temperature. If this error message re-occurs, there may be a more serious failure (see Problem Analysis and Solutions).

LOWER HEATER > 250C
FAIL – PRESS ANY KEY

LOWER HEATER > 482F
FAIL – PRESS ANY KEY

UPPER HEATER > 250C
FAIL – PRESS ANY KEY

UPPER HEATER > 482F
FAIL – PRESS ANY KEY

The heater has exceeded its maximum safe temperature, or a thermocouple or circuit board has failed. Machine operation will stop and an alarm will sound. Press any key to silence the alarm and return to normal mode. Shut down machine and check thermocouple and circuit boards. Repair or replace as needed before resuming operation of machine.

CAUTION: HIGH TEMPERATURES CAN DAMAGE MACHINE AND CAUSE PERSONAL HARM. DO NOT OPERATE IF HEATER FAILURE MESSAGE APPEARS!

Section 4

OPERATIONS AND PROBLEM ANALYSIS

Sequence of Operations

Connect air supply – no electrical operations; sealing head in upright position.

Switch power on – heat goes on, switch light goes on, LCD screen displays start-up menus.

Pull sealing head down – micro switch engages, energizing solenoid valve, engaging sealing hook. Timer is activated and begins counting.

Timer times out – seal arm solenoid valve is de-energized, returning sealing platen to top position.

If power goes off (or machine is unplugged) the sealing platen stays in the up position.

If air is removed sealing platen remains up.

PROBLEM ANALYSIS AND SOLUTIONS

Before referring to the information below, check for proper set-up and operation as outlined in Sections 2 and 3.

Solutions are listed with the most probable ones listed first.

Some procedures may require completion by a person with some mechanical skill. See Section 6 for Customer Service assistance or to order replacement parts.

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PROBLEM	POSSIBLE CAUSE	SOLUTION
Power "ON" light not lighted	-Machine is unplugged or outlet has no power	-Check
	-Electrical power switch or light is not "ON" or is defective	-Check/Replace
	-Bad fuse at power entry module	-Check/Replace
	-Loose or broken wires or connections	-Check/Repair
No heat	-Machine is unplugged or outlet has no power	-Check
	-Electrical power switch is not "ON" or is defective	-Check/Replace
	-Blown fuse on circuit board	-Replace
	-Defective sealing iron	-Replace
	-Defective heat sensor	-Replace
	-Defective temperature control	-Replace
	-Defective high-limit thermostat	-Replace
	-Loose or broken wires or connectors	-Check/Repair
High or low heat	-Defective heat sensor	-Replace
	-Defective temperature control	-Replace
	-Short between sensor wires (high heat only)	-Repair/Replace
Sealing pressure drops, fluctuates, or hisses	-Leak in air supply hose	-Repair/Replace
	-Dust, oil, or water in air lines, regulator, or solenoid air valves	-Disassemble and clean
Timed sealing cycle does not activate	-Garment or cloth is too thick	-See Section 3-3
	-Leak in hose or connections	-Repair/Replace
	-Defective micro switch	-Replace
	-Solenoid air valve not shifting	-Disassemble and clean or replace
	-Mechanical binding	-Check/Correct
	-Cracked sealing hook	-Replace
	-Cracked sealing arm	-Replace
	-Missing or broken pins or cam rollers	-Replace and add grease
	-Loose or disconnected wiring	-Check/Correct
Sealing head does not fully rise	-Air solenoid valve not shifting	-Check/Replace
	-Leak or restriction in air line or connections	-Check/Repair
Heat transfers or patches, etc. not bonded properly to garment	-Insufficient sealing time	-Increase time
	-Insufficient sealing pressure	-Increase sealing pressure
	-Insufficient temperature	-Increase temperature on Teflon platen
	-Sponge rubber pad is worn	-Replace
	-Teflon cloth covers for upper/lower platens are worn	-Clean/Replace

PROBLEM	POSSIBLE CAUSE	SOLUTION
Adhesive bleed through	-Sealing time too long	-Decrease by 2 second increments
	-Sealing pressure too high	-Decrease sealing air gauge pressure by 5 PSI or .5 Bar increments

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Section 5

MAINTENANCE

Teflon/Fiberglass Shield

Clean often by wiping with a soft, clean rag. A non-flammable cleaner such as "EZ-Off", part number DH-6873, may be used according to the manufacturer's instructions. Never use a flammable solvent or abrasive cleaner! To ensure the best heat-sealing results, regularly replace shield whenever it becomes torn or too soiled to clean.

From the side, gently wedge a screwdriver between the sealing iron and the aluminum backing plate. The shield may now be removed by applying gentle pressure. Being careful of the heat, install the new shield by holding it against the sealing iron and pressing to snap it into position.

Rubber Sealing Pads (without Teflon Cover)

Clean often by wiping with a soft, clean rag. Replace the pad when it becomes worn.

Note: To replace the rubber sealing pad, use the same procedure as for the shield.

Compressed Air Supply

Maintain a filtered air supply. Check air filter daily. Drain by pushing up on button at bottom of filter bowl.

General

Keep inside of machine free of foreign material, including lint.

Lubrication

Place one drop of standard lubricating oil (SAE 10 or equivalent) at the following locations once a month:

- Pivot shafts for sealing arm: at both ends of shaft where it enters case (See Upper Iron and Chassis Assembly)
- Air cylinders: where the rod enters the cylinder (See Machine Chassis Assembly)
- Sealing hook, pins, and cam rollers: both rollers and pins in the sealing hook and sealing arm (See Sealing Hook and Bracket Assembly, Fulcrum Arm and Chassis Assembly)

Be sure to wipe off any excess oil.

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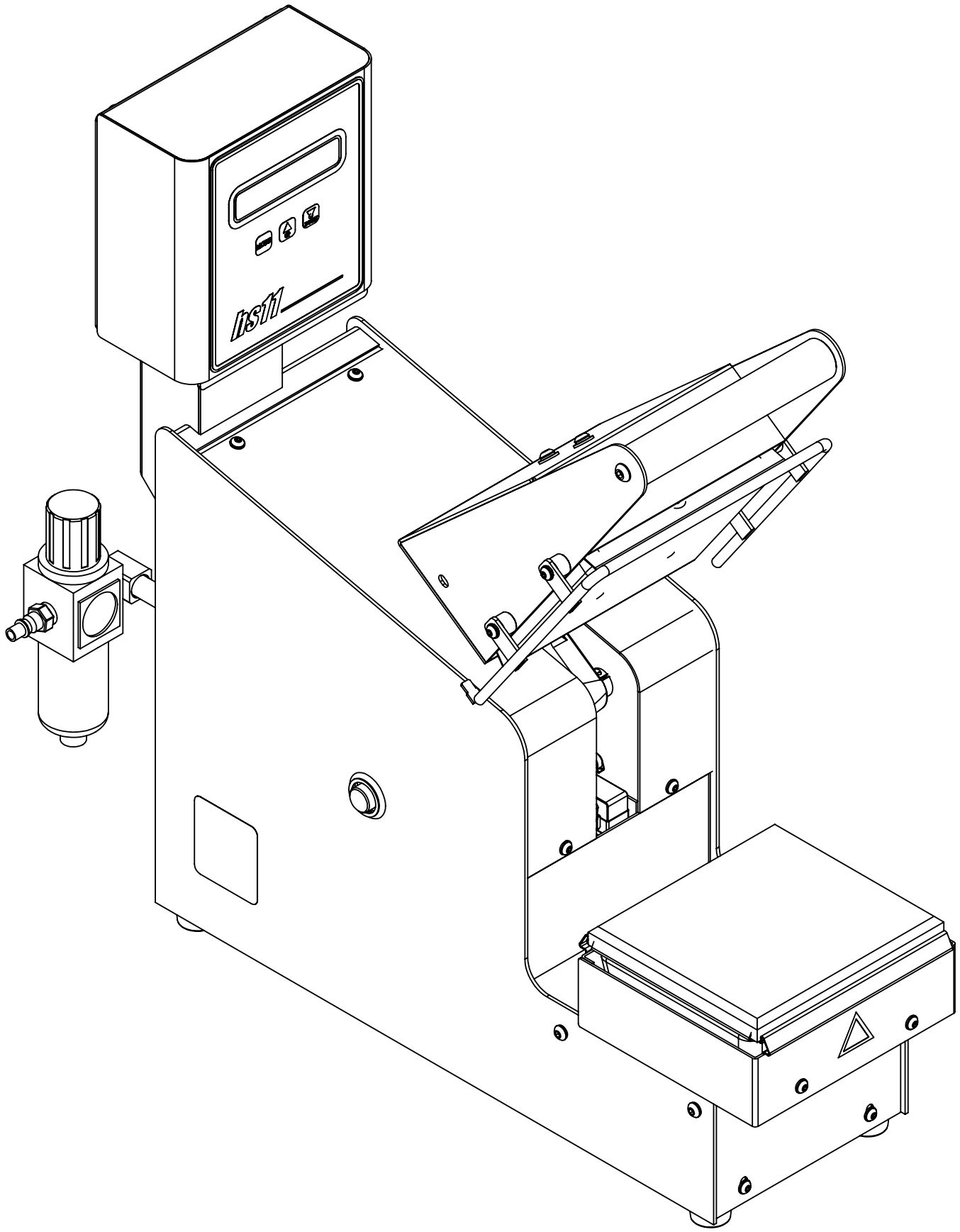
Section 6

PARTS IDENTIFICATION AND LOCATION



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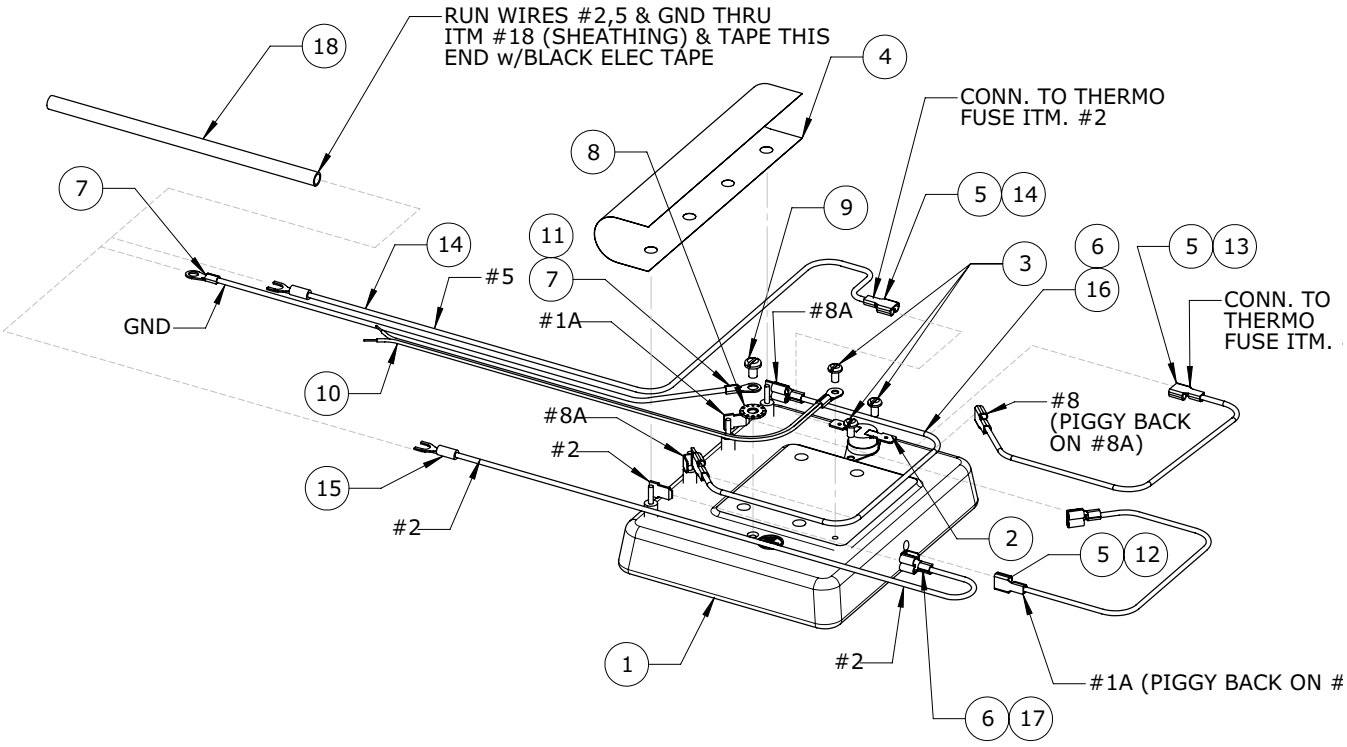
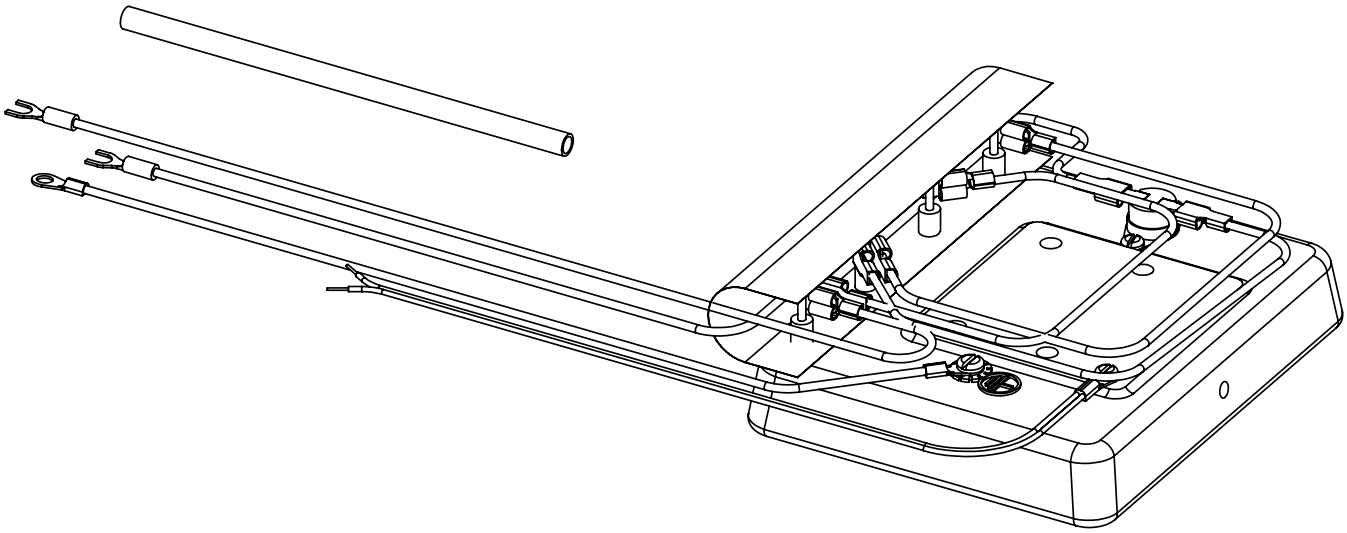


LOWER SEALING IRON ASSEMBLY

REV. 190509

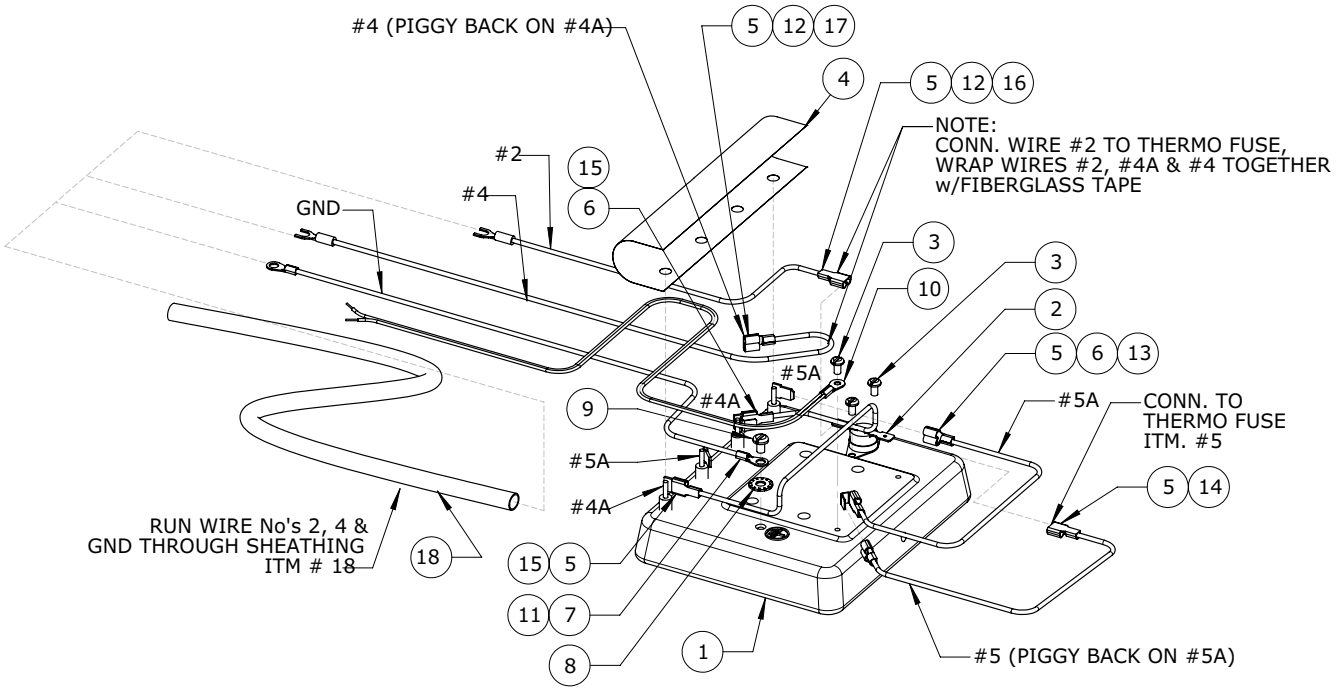
thermopatch.com

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42458	IRON, SEALING
2	1	20018-11	THERMO FUSE, (500° F]
3	3	21069-03-E	PHSS #6-32UNC x ¼ STN. STL.
4	1	41717	SHIELD, TEFLON
5	6	20003-20	¼" PUSH ON CONNECTOR
6	2	20003-28	¼" PUSH ON CONNECTOR (PIGGY BACK)
7	2	20003-45	RING TERMINAL, #8 NON-INSULATED
8	1	21021-06-B	LOCKWASHER, EXT. TOOTH, #8
9	1	21069-03-F	PHSS #8 -32UNC x 1/4 STN. STL.
10	1	20018-14	THERMOCOUPLE, 'J' SERIES 36" LONG
11	1	23001-15	GROUND WIRE, 16 Ga. 12" GREEN/YELLOW
12	1	23001-23	WIRE #1A, 16 Ga. 10" WHITE
13	1	23001-23	WIRE #8, 16 Ga. 8-1/2" WHITE
14	1	23001-23	WIRE #5, 16Ga. 17" WHITE
15	2	D-3128	SPADE CONNECTOR, #6 STUD
16	1	23001-23	WIRE #8A, 16 Ga. 10-1/8" WHITE
17	1	23001-23	WIRE #2, 16 Ga. 36" WHITE
18	1	DH-6634	SHEATHING, FIBERGLASS 6"



LOWER SEALING IRON ASSEMBLY

thermopatch.com

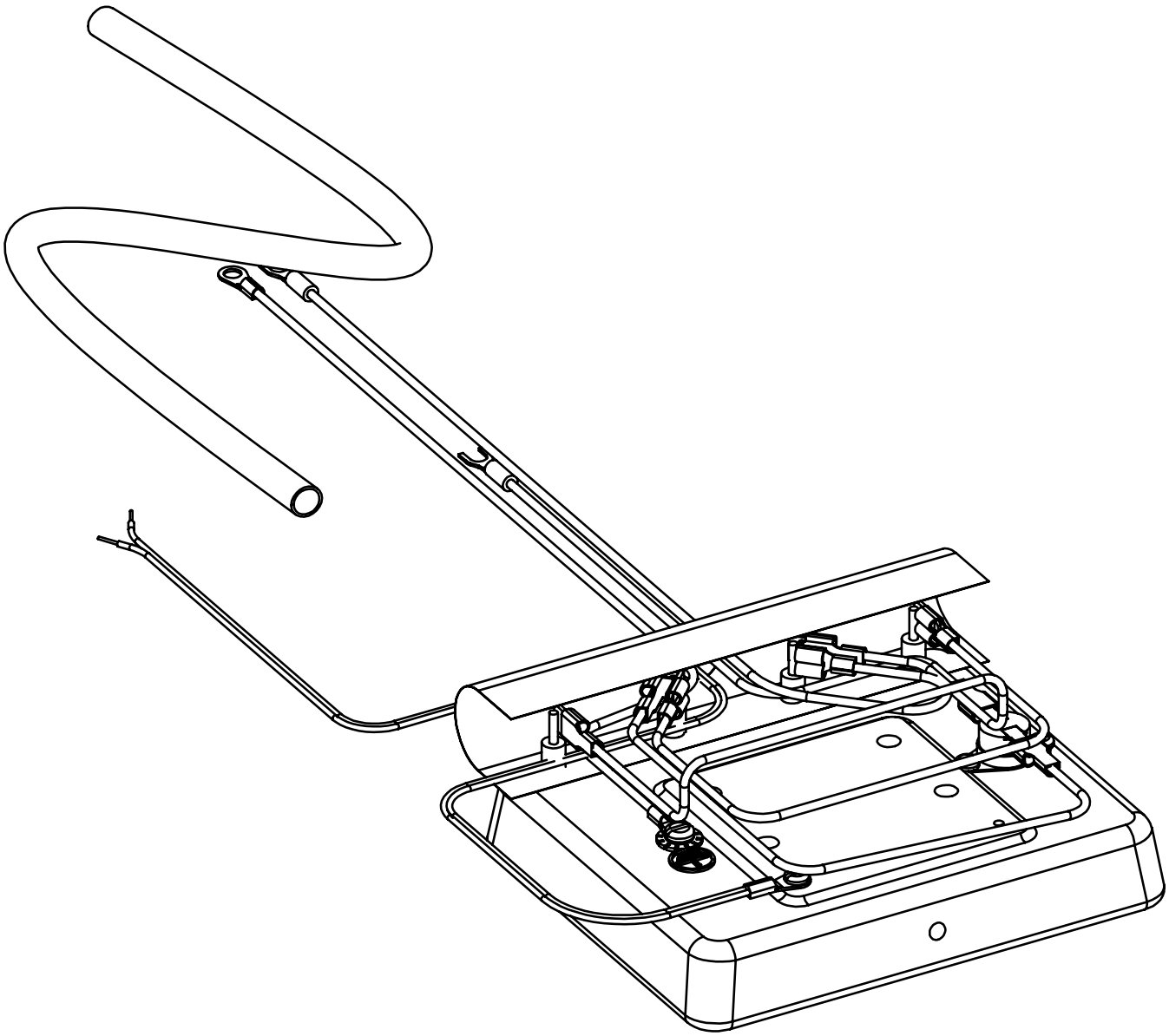


UPPER SEALING IRON ASSEMBLY

REV. 080103

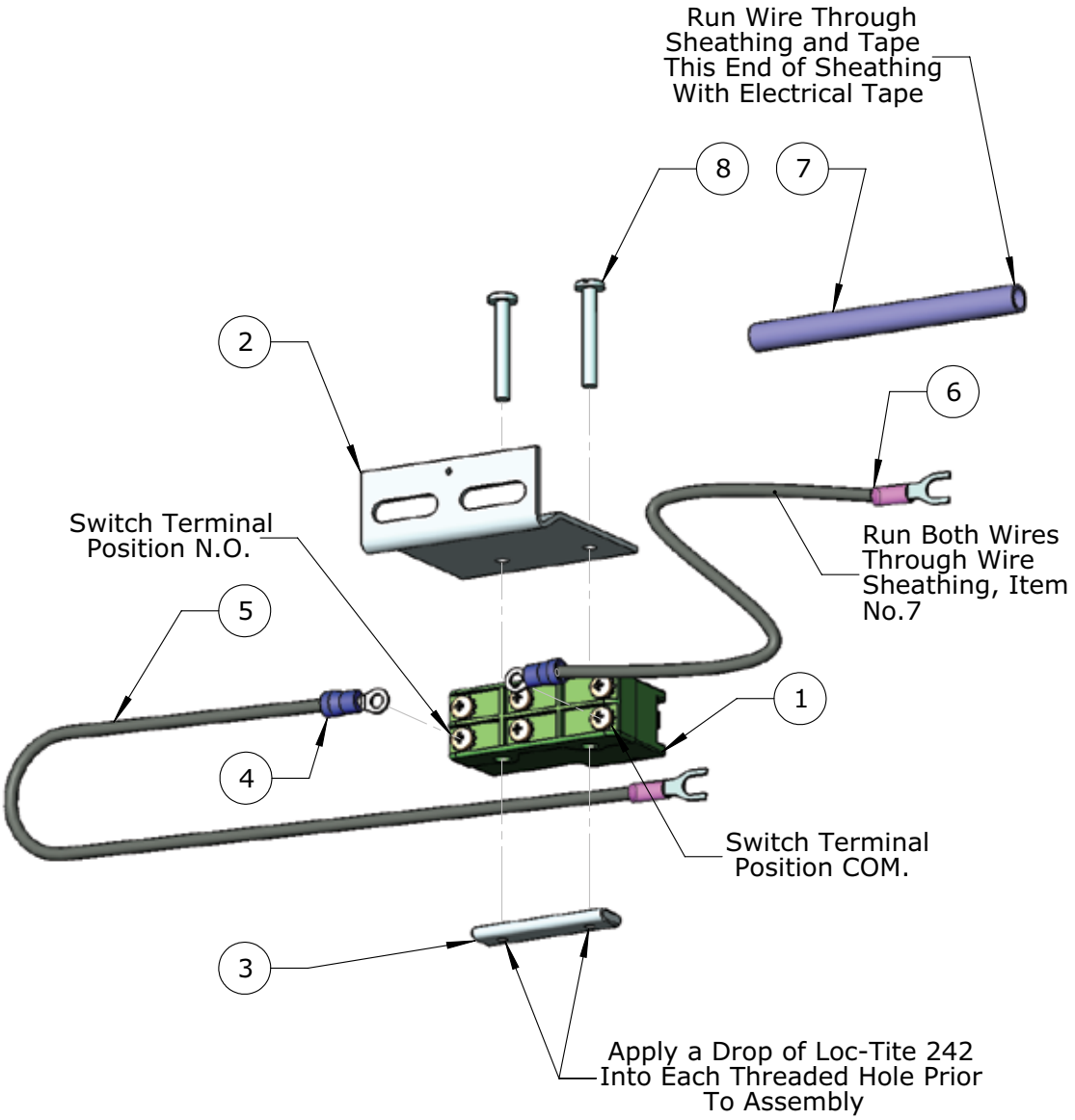
thermopatch.com

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42458	IRON, SEALING
2	1	20018-11	THERMO FUSE, (500° F)
3	3	21069-03-E	PHSS #6-32UNC x ¼" STN. STL.
4	1	41717	SHIELD, TEFLON
5	6	20003-20	¼" PUSH ON CONNECTOR
6	2	20003-28	¼" PUSH ON CONNECTOR (PIGGY BACK)
7	2	20003-45	RING TERMINAL, #8 NON-INSULATED
8	1	21021-06-B	LOCKWASHER EXT. TOOTH #8
9	1	21069-03-F	PHSS #8-32UNC x ¼" STN. STL.
10	1	20018-14	THERMOCOUPLE, 'J' SERIES 36" LONG
11	1	23001-15	GROUND WIRE, 16 Ga. 12" LONG
12	2	D-3128	SPADE CONNECTOR, #6 STUD
13	1	23001-23	WIRE #5A, 16Ga. 17" WHITE
14	1	23001-23	WIRE #5, 16 Ga. 17" WHITE
15	1	23001-23	WIRE #4A, 16 Ga. 10-1/8" WHITE
16	1	23001-23	WIRE #2, 16 Ga. 36" WHITE
17	1	23001-23	WIRE #4, 16 Ga. 36" WHITE
18	1	DH-6634	SHEATHING, FIBERGLASS 6"



UPPER SEALING IRON ASSEMBLY

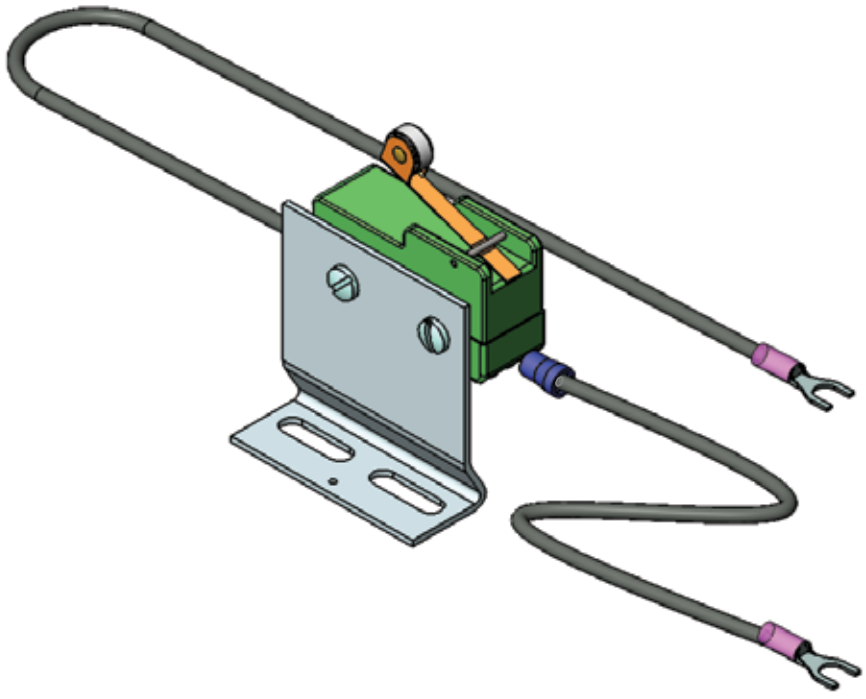
REV. 080103

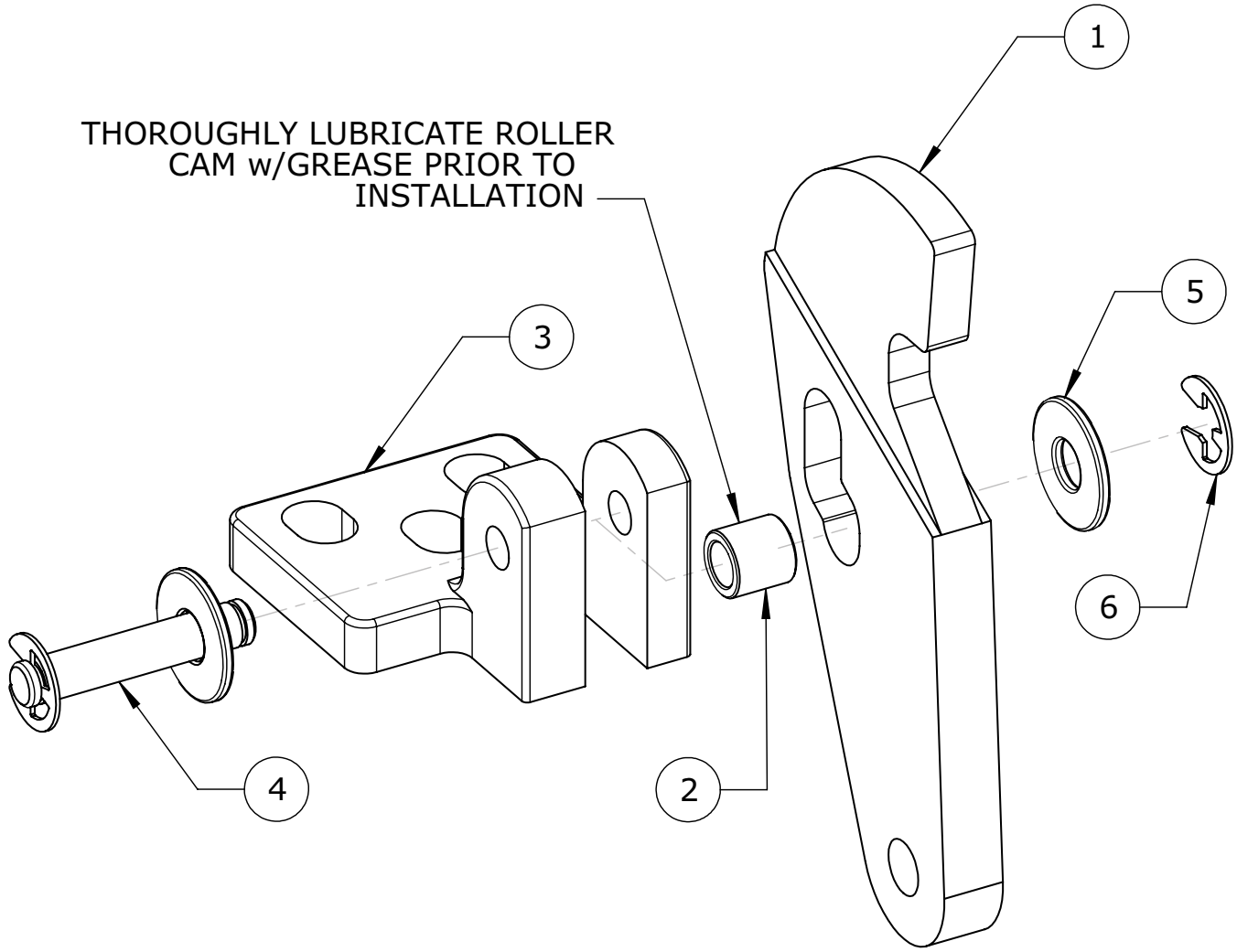


MICROSWITCH AND BRACKET ASSEMBLY

REV. 240209

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	20055-100	MICRO SWITCH, DPDT
2	1	44214	MOUNTING BRACKET, MICRO SWITCH
3	1	40925	BAR NUT, #6-32UNC-2B
4	2	20003-34	RING CONNECTOR, #6 STUD SIZE
5	46”	23001-21	INSULATED ELECTRICAL WIRE, 20 GAUGE, BLACK [23” LG EA]
6	2	D-3128	SPADE CONNECTOR, #6 STUD
7	1	DH-6634	SHEATHING, FIBERGLASS – 18” LG
8	2	21060-11-E	BINDER HEAD SCREW, #6-32UNC x 1” LG



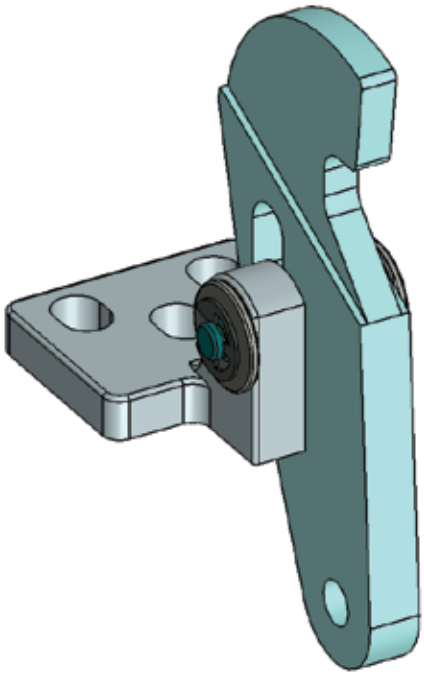


SEALING HOOK AND BRACKET ASSEMBLY

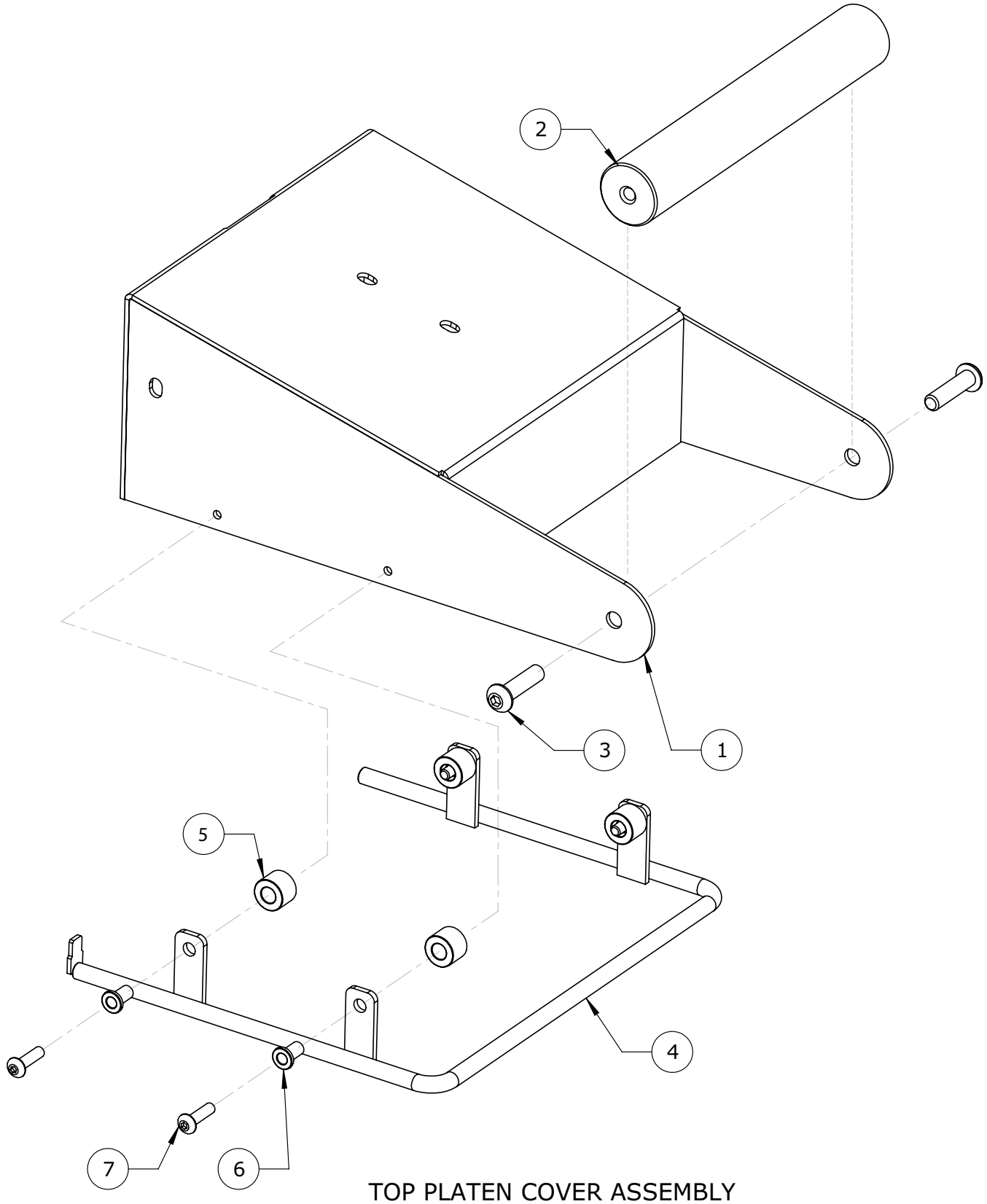
REV. 080103

thermopatch.com

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42753	HOOK, SEALING
2	1	DH-6666	ROLLER, SEALING CAM
3	1	DH-6654	BRACKET, SEALING HOOK
4	1	D-8362	PIN, SEALING HOOK
5	2	21023-02	WASHER, PLAIN FLAT 1/4"
6	2	D-9702	RETAINING RING, TRU-ARC (5133-25)



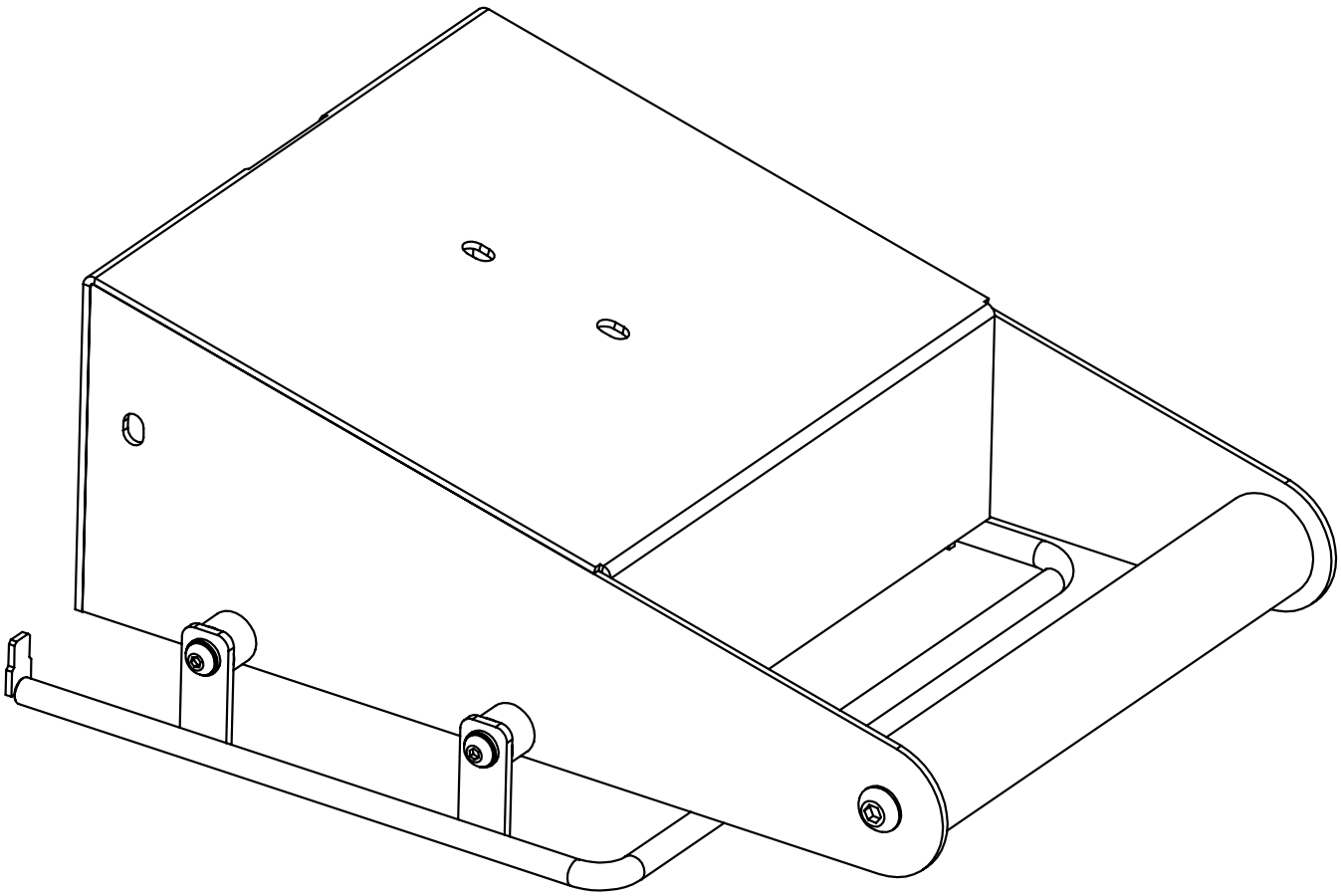
thermopatch.com

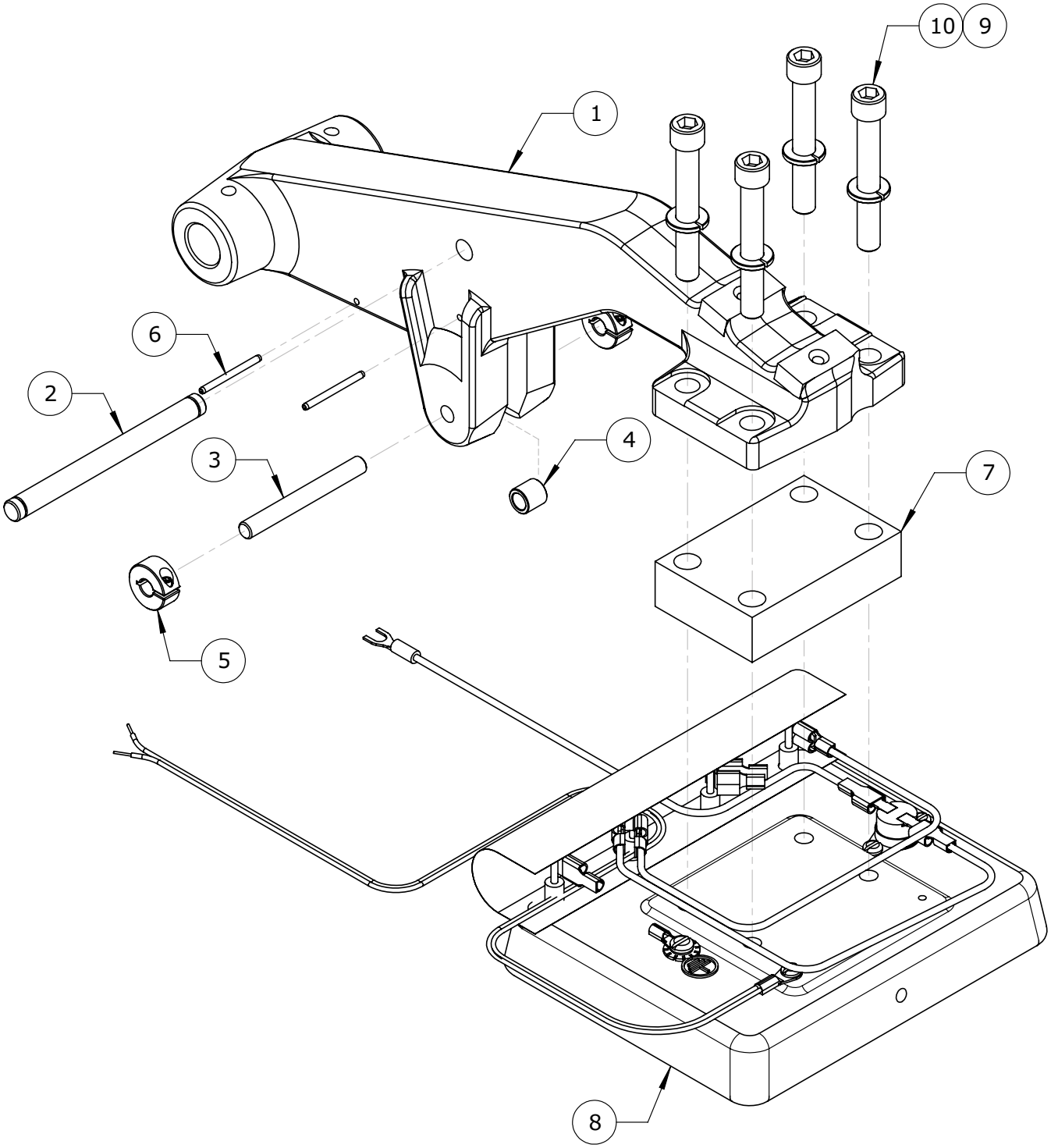


TOP PLATEN COVER ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	46555	ASSEMBLY, TOP PLATEN
2	1	46554	HANDLE, TOP IRON COVER
3	2	21061-07-F-N	1/4 - 20UNC x 1" LG BHSS
4	1	46568	ASSEMBLY, TOUCH GUARD
5	4	21028-50	SPACER, TOUCH GUARD, NYLON
6	4	21028-51	INSULATOR, SHOULDER, NYLON
7	4	21061-04-C	#8-32UNC x 5/8" LG BHSH

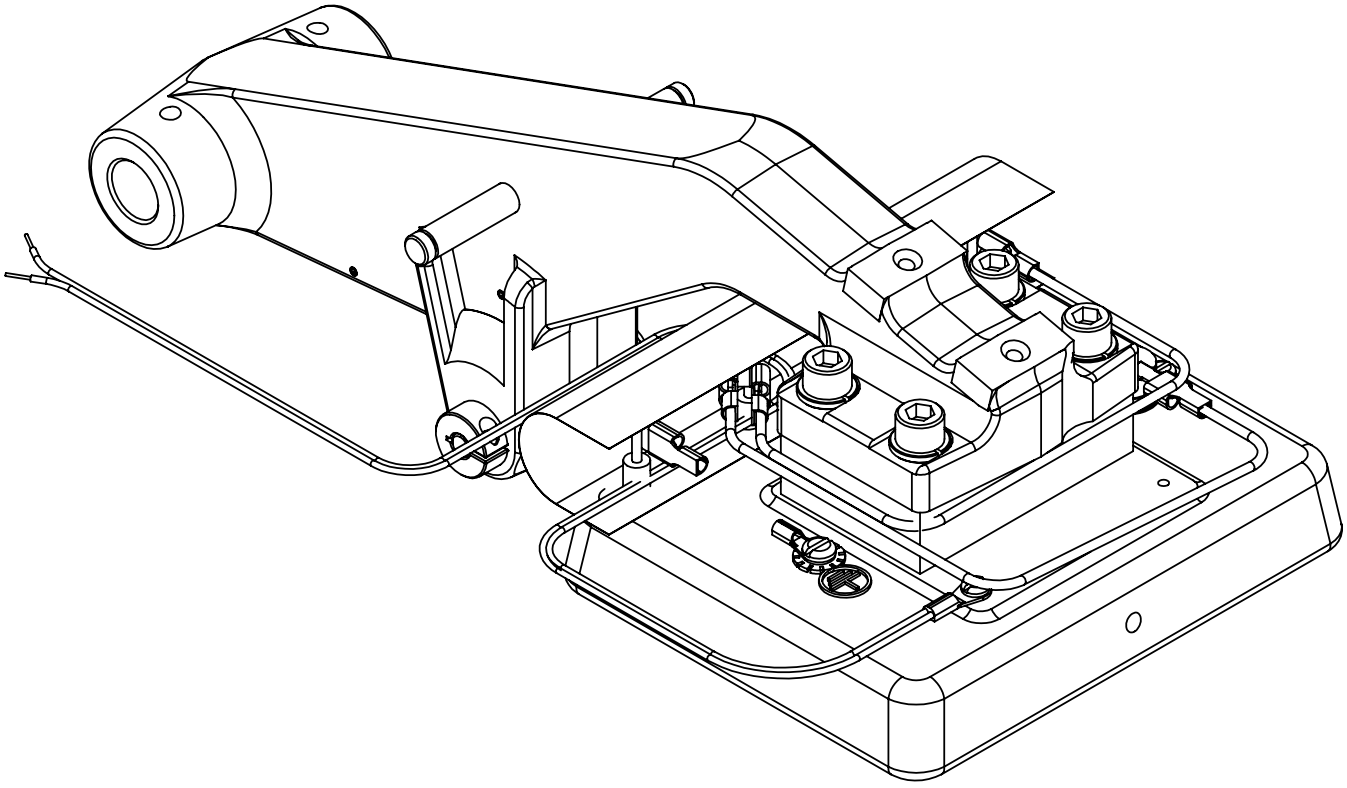


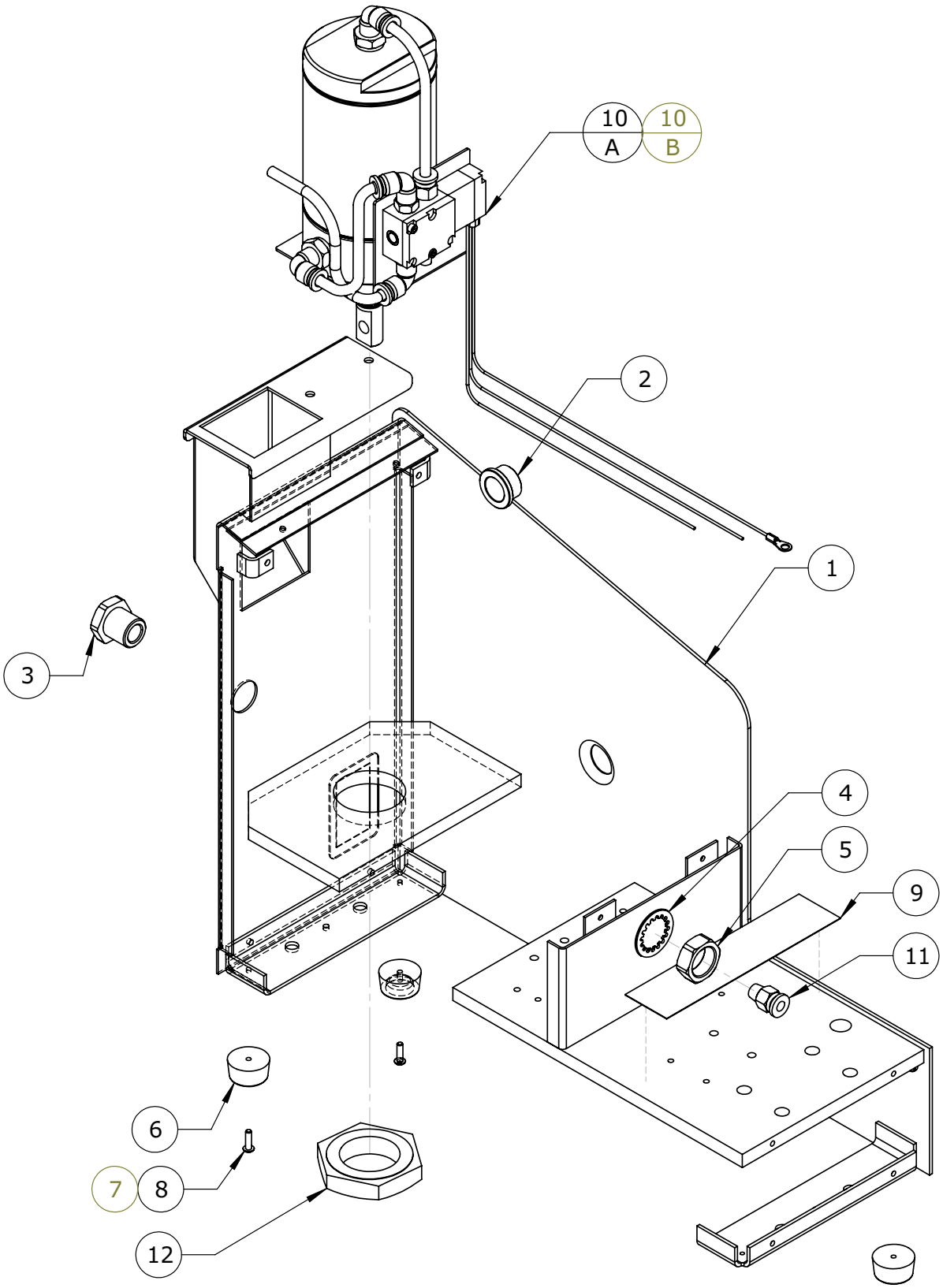


SEALING ARM ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42453	SEALING ARM, MACHINED
2	1	PM-170-3	PIN, SPRING RETAINING
3	1	21034-11-C	PIN, DOWEL (.25 DIA x 2.25 LG)
4	1	DH-6666	ROLLER, SEALING CAM
5	2	24016-17	COLLAR, LOCK
6	2	21033-09-B	PIN, ROLL (.094 DIA x 1.125 LG)
7	1	42455	BLOCK, SPACER, UPPER SEALING IRON
8	1	Assem2	ASSEMBLY, UPPER SEALING IRON
9	4	21021-10-C	LOCKWASHER, 5/16, HELICAL SPRING
10	4	21050-194	5/16 - 18UNC x 2-1/4" LG SHCS

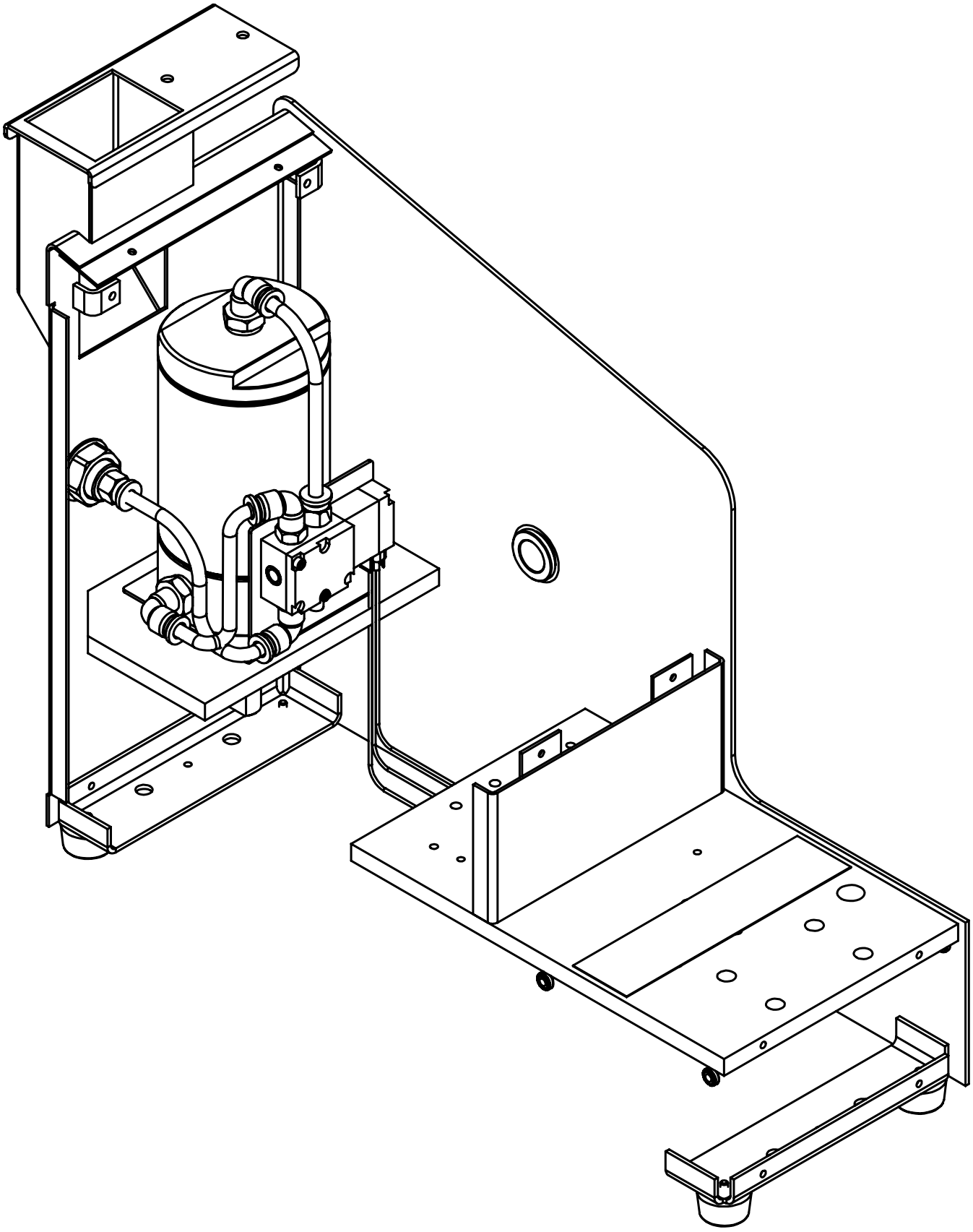


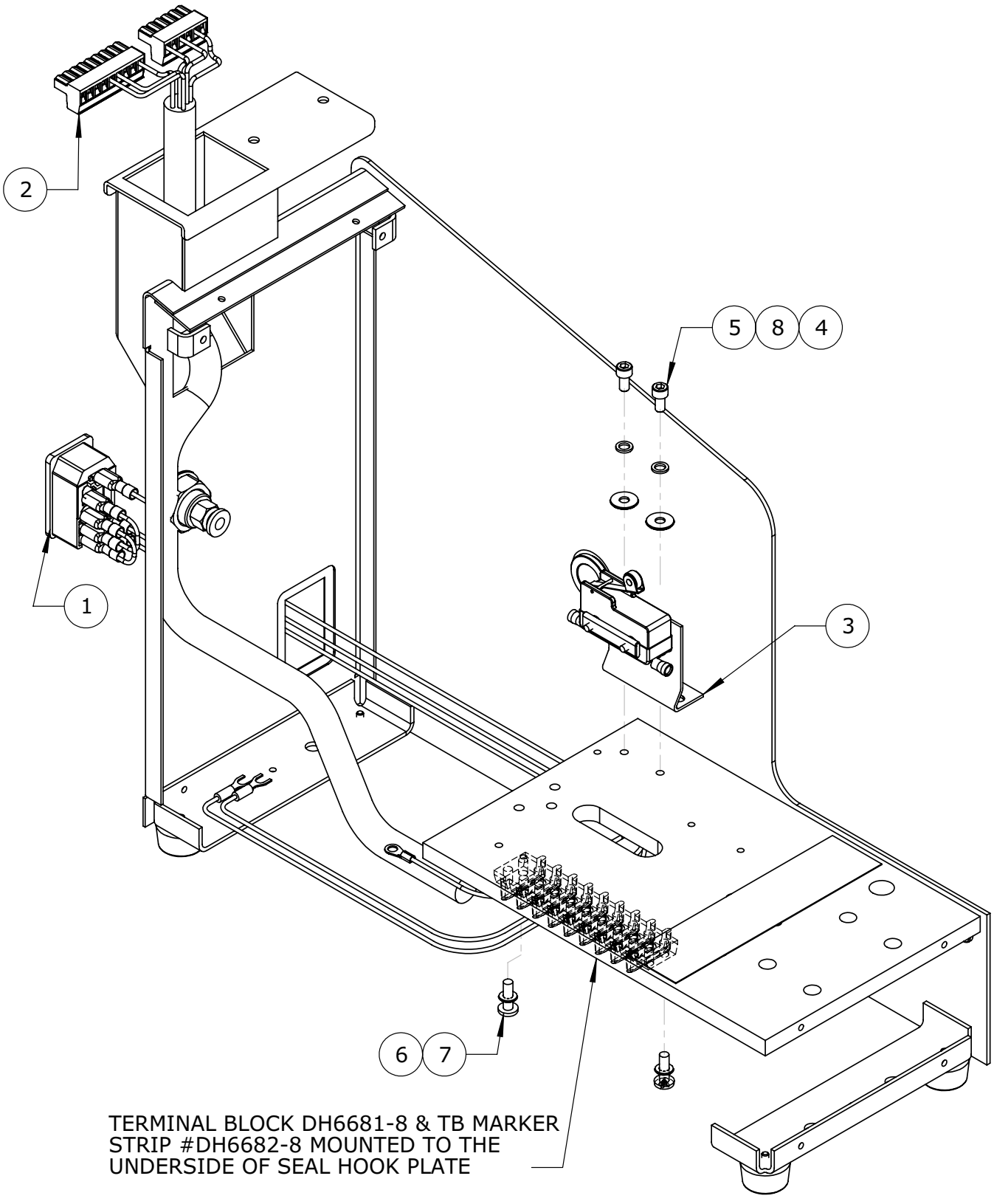


MACHINE CHASSIS ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42330	WELDMENT, ASSEMBLY, MACHINE CHASSIS
2	2	24004-12	BEARING, BRONZE FLANGE, (Ø.625 I.D.)
3	1	22030-67	FITTING, BULKHEAD, (¼"MNPT x ¼" FNPT)
4	1	22030-67-C	LOCKWASHER, INTERNAL TOOTH (part of 22030-67)
5	1	22030-67-B	HEX NUT, (3/4 – 10UNC) (part of 22030-67)
6	4	21050-185	FOOT, MACHINE CHASSIS (70 DUR. BUNA-N)
7	4	21023-22	WASHER, #6 FLAT
8	4	21061-03-B	#6 – 32UNC x .50 LONG BUT. HD. SOC. HEX.
9	1	42649	STRIP, TEFLON INSULATION w/PSA
10A	1	46573	ASSEMBLY, PNEUMATIC SEALING CYLINDER, 115 VOLT
10B	1	46862	ASSEMBLY, PNEUMATIC SEALING CYLINDER, 230 VOLT
11	1	22005-58	FITTING, STRAIGHT, BULKHEAD, (SPC)
12	1	21051-28-C	NUT, HEX, CYLINDER MOUNTING, (BIMBA)

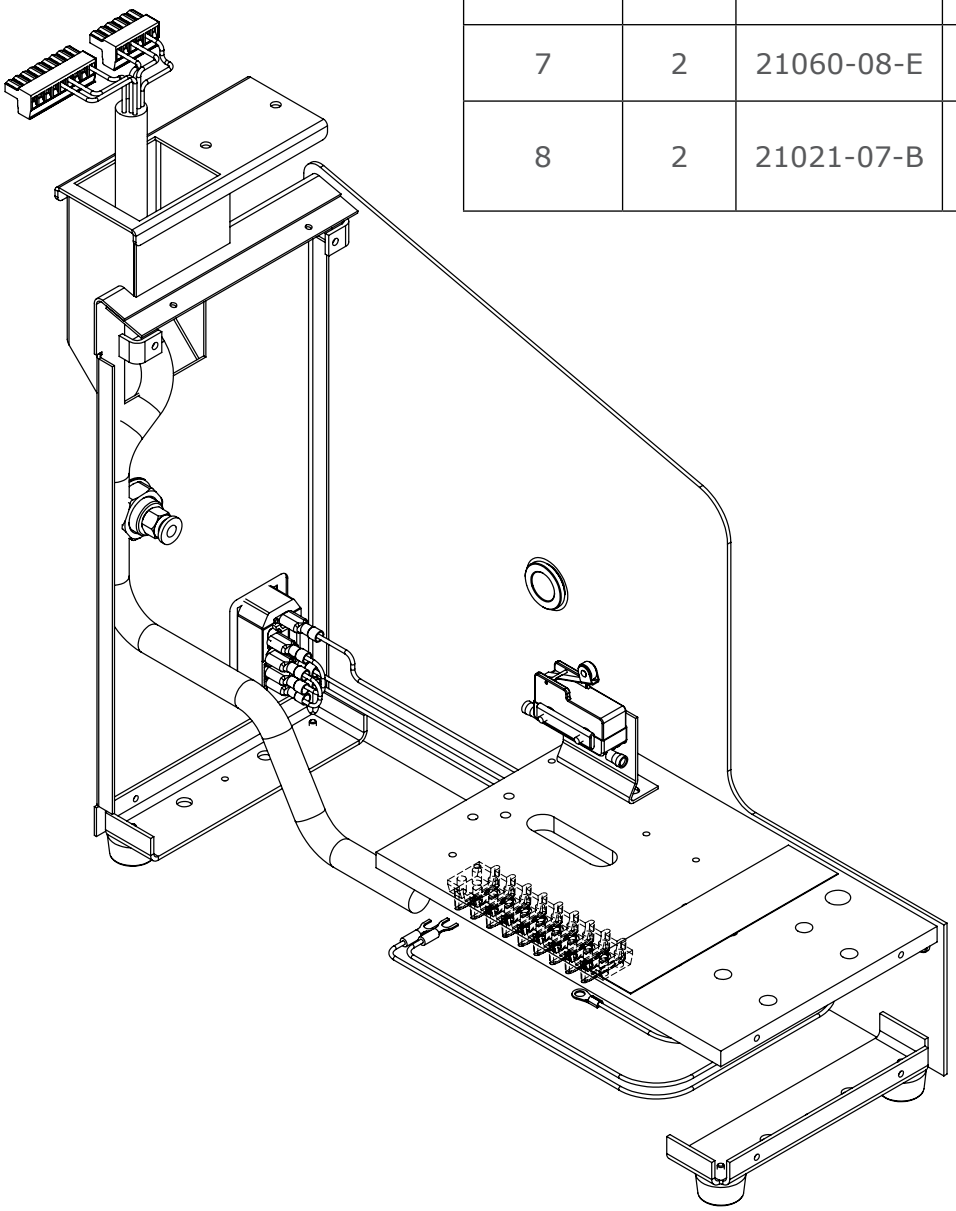


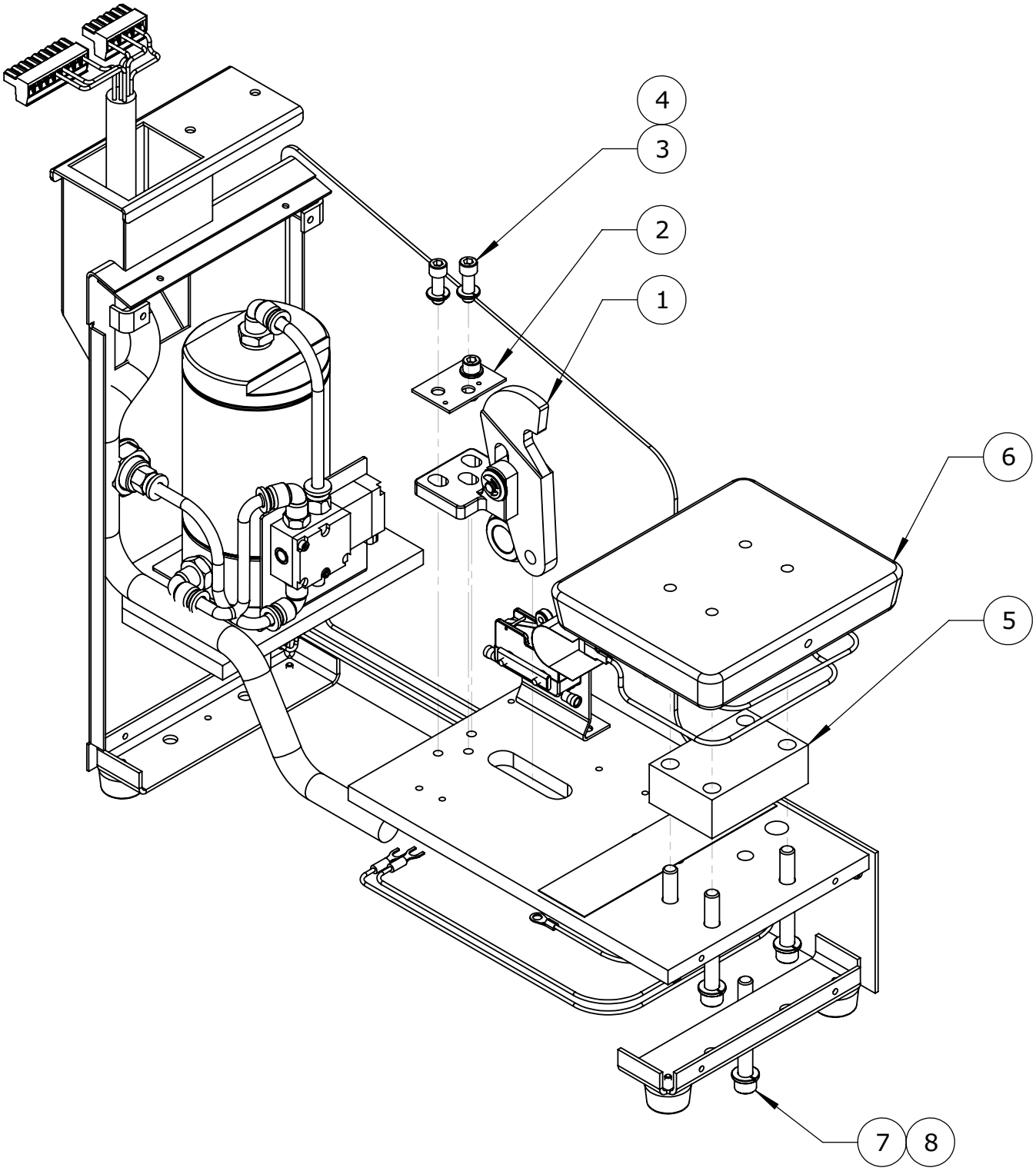


WIRING HARNESS AND CHASSIS ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	46581	ASSEMBLY, WIRE HARNESSS, POWER ENTRY MODULE
2	1	46570	ASSEMBLY, WIRE HARNESS, MACHINE
3	1	Assem4	ASSEMBLY, MICRO SWITCH
4	2	21023-01	WASHER, FLAT, #10, ZINC PLATED
5	2	21063-03-J	#10 – 32UNC x 3/8" LONG, SOC. HD. CAP SCREW
6	2	21021-05-A	LOCKWASHER, #6, INTERNAL TOOTH, ZINC PLATED
7	2	21060-08-E	#6 – 32UNC x 5/8" LONG, BINDER HD. SCREW
8	2	21021-07-B	LOCKWASHER, #10 EXTERNAL TOOTH, ZINC PLATED

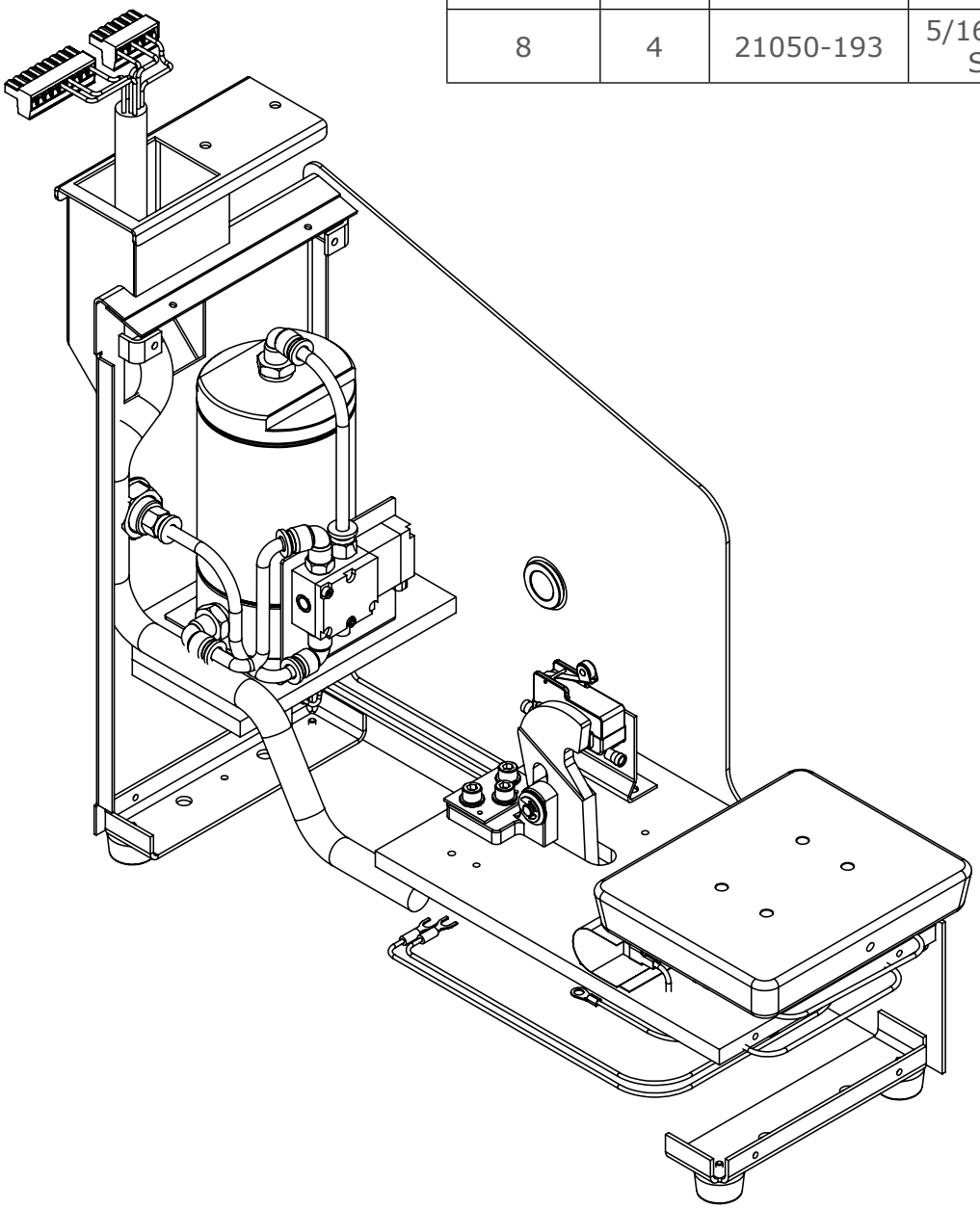


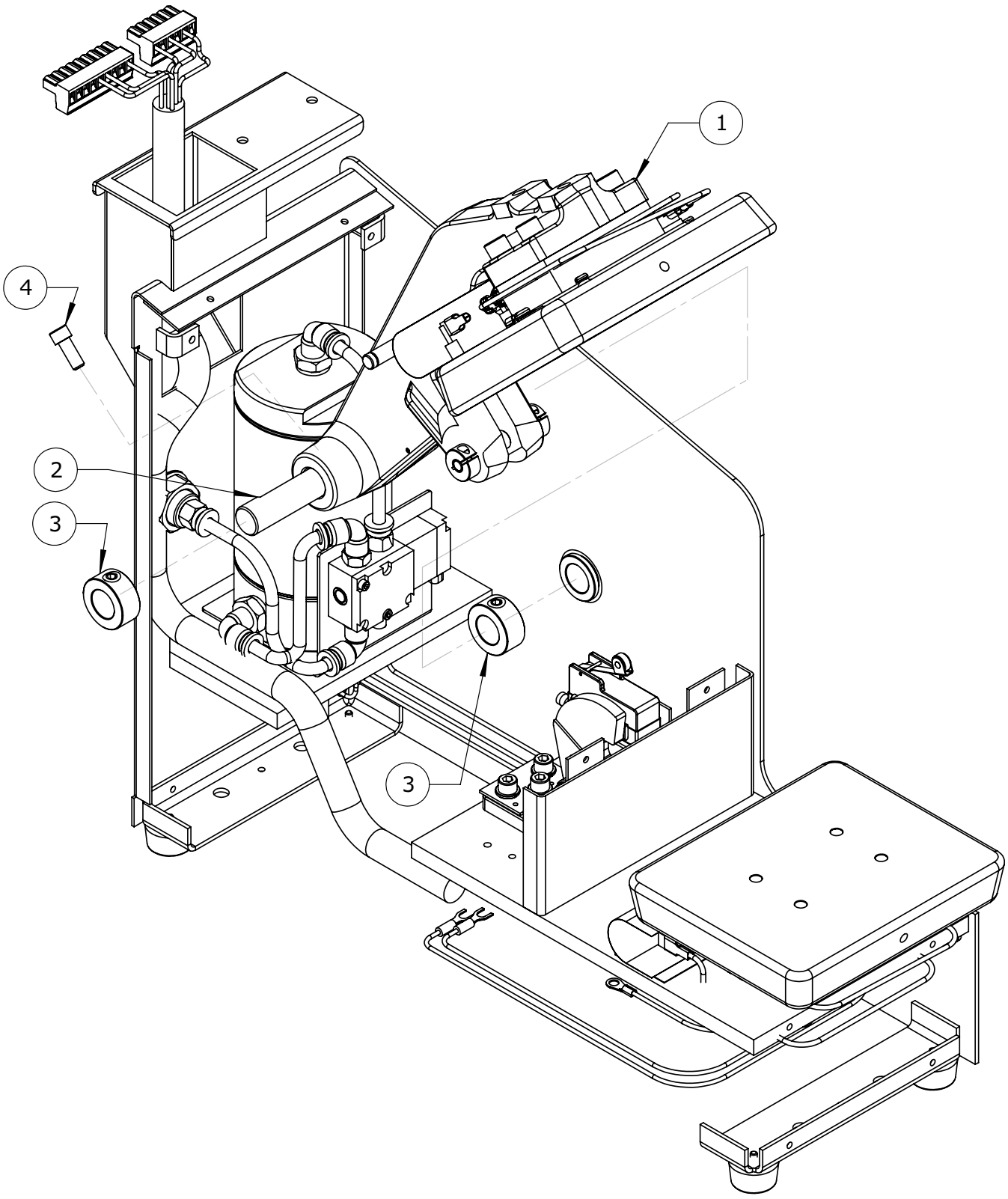


SEAL HOOK AND LOWER IRON ASSEMBLY

REV 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	Assem5	ASSEMBLY, SEALING ARM HOOK
2	1	DH-6655	PLATE, ROLLER BRACKET
3	3	21063-06-K	1/4 - 20UNC x 3/4" LG. SOC. HD. CAP SCR.
4	3	21021-09-C	LOCKWASHER, 1/4" HELICAL SPRING
5	1	42456	SPACER, INSULATING, BOTTOM
6	1	Assem1	ASSEMBLY, LOWER HEATER IRON
7	4	21021-10-C	LOCKWASHER, 5/16, HELICAL SPRING
8	4	21050-193	5/16 - 18UNC x 2.50" LG. SOC. HD. CAP SCR.

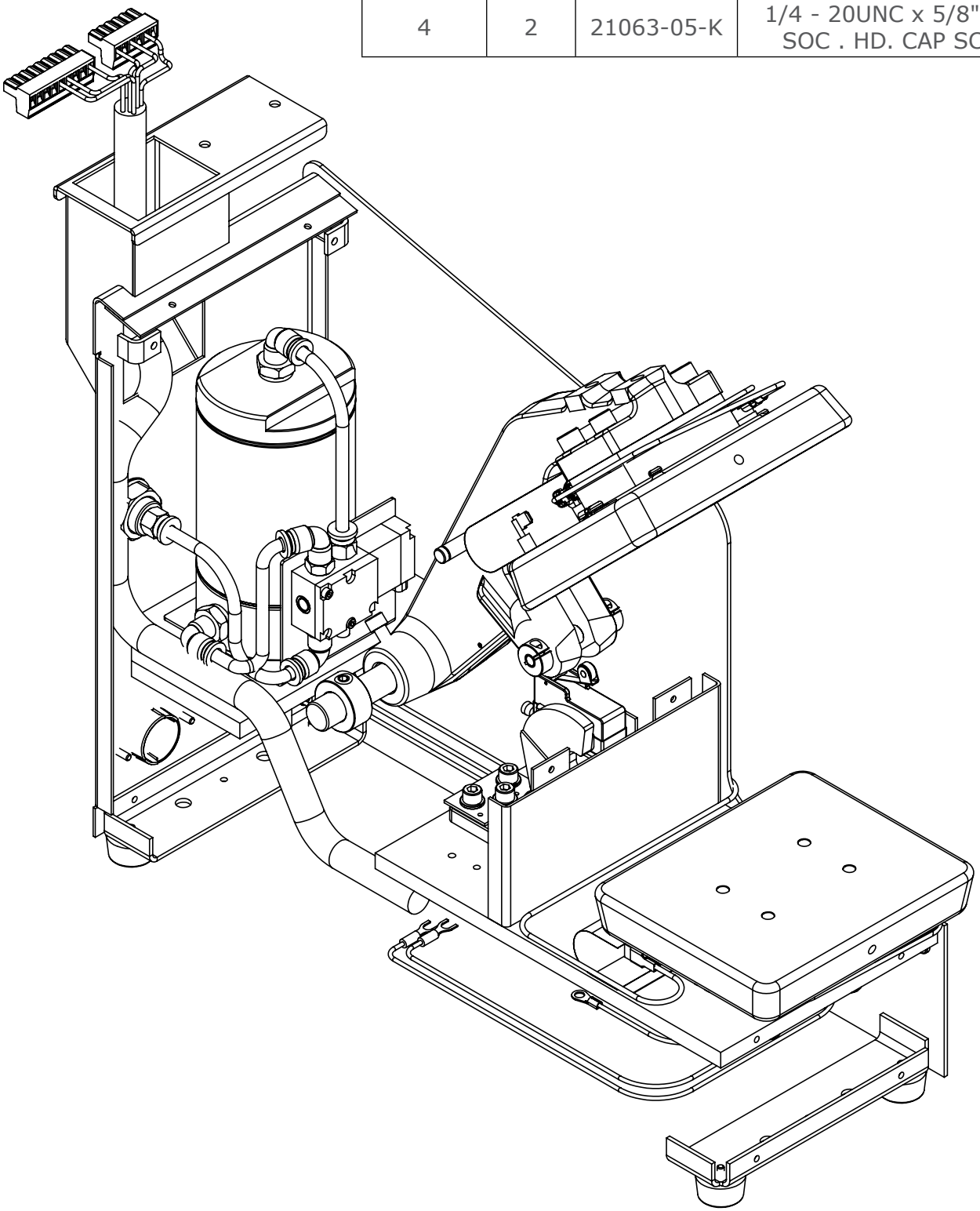


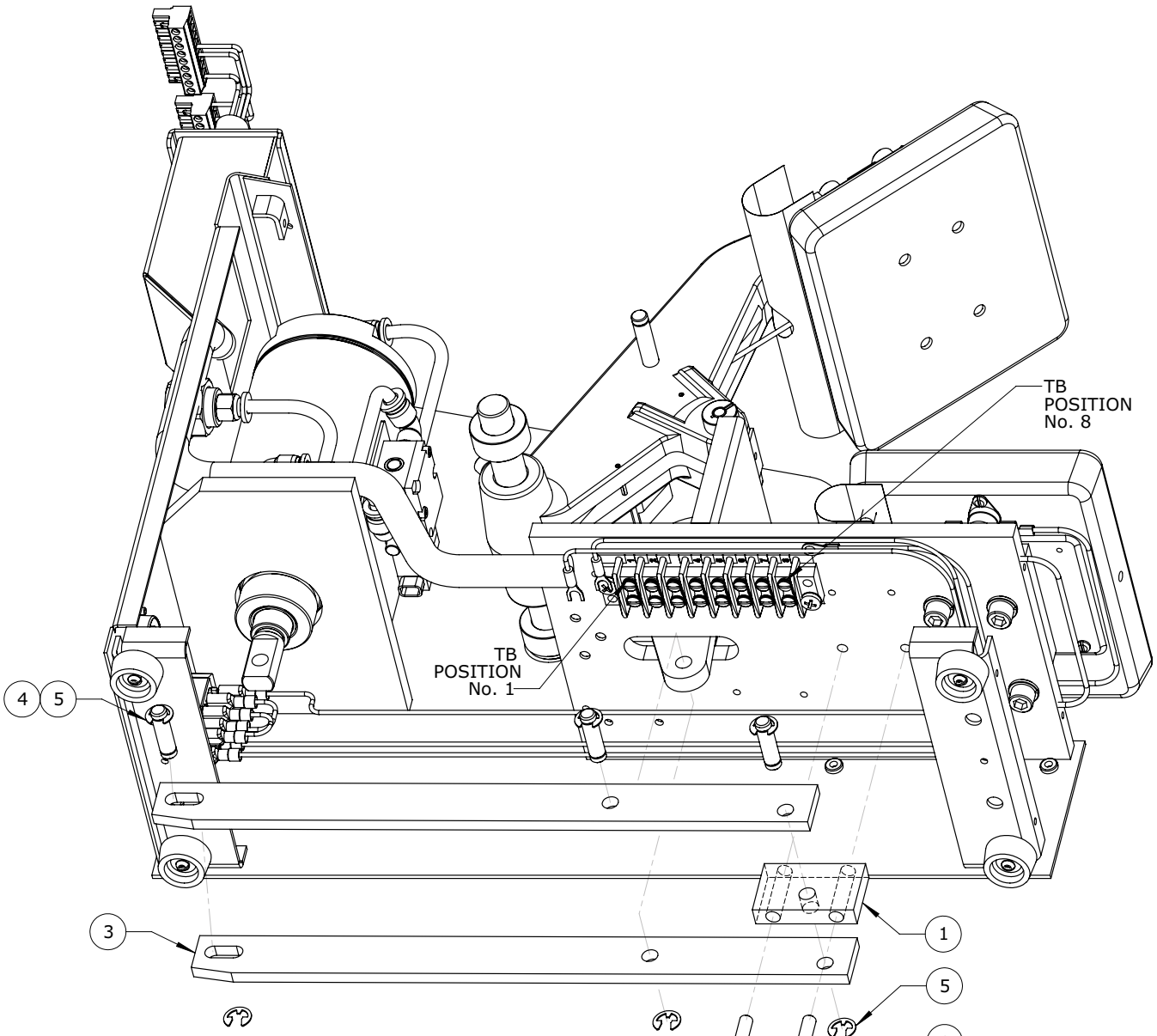


UPPER IRON AND CHASSIS ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	Assem8	ASSEMBLY, UPPER HEATER IRON
2	1	42345	SHAFT, MAIN SEAL ARM
3	2	PM-37	COLLAR, MAIN SEAL ARM SHAFT
4	2	21063-05-K	1/4 - 20UNC x 5/8" LG. SOC . HD. CAP SCR.

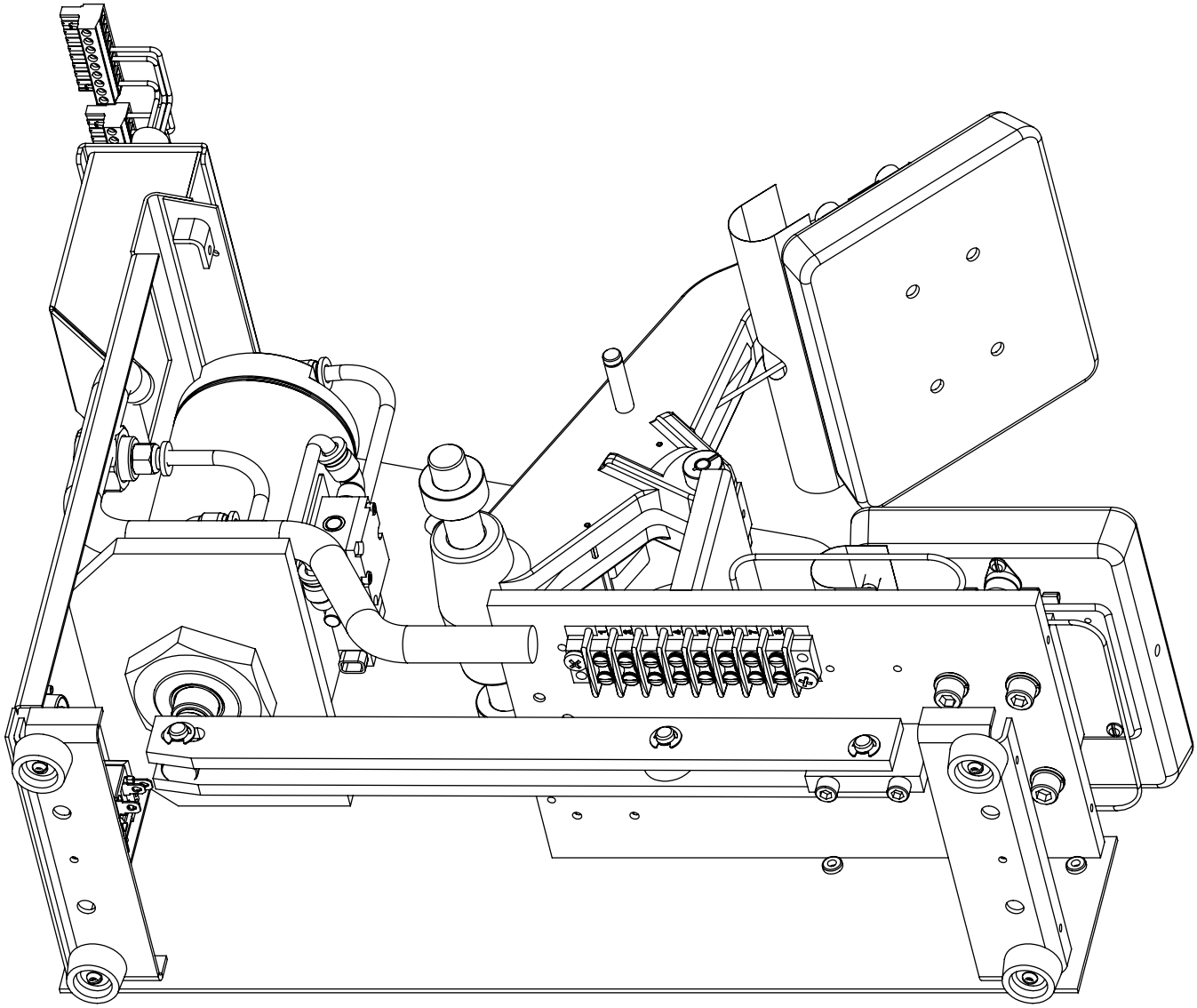


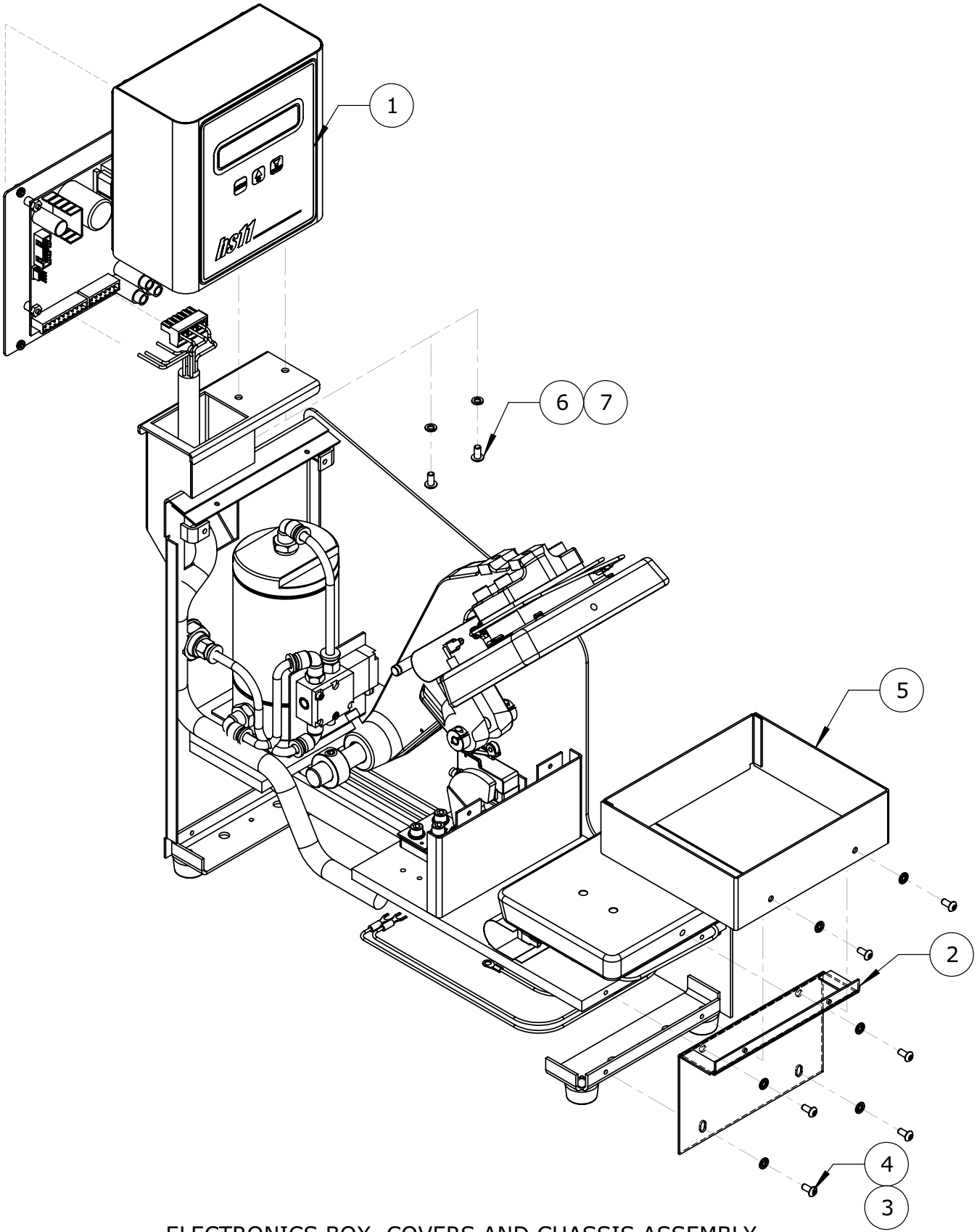


FULCRUM ARM AND CHASSIS ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42346	MOUNTING BLOCK, PIVOT
2	2	21063-10-K	1/4 - 20UNC x 1.50" LG. SOC. HD. CAP SCR.
3	2	42347	ARM, FULCRUM
4	3	DH-6725	PIN, PIVOT, Ø.312"
5	6	D-9704	RETAINING RING, SNAP 'E' Ø.250

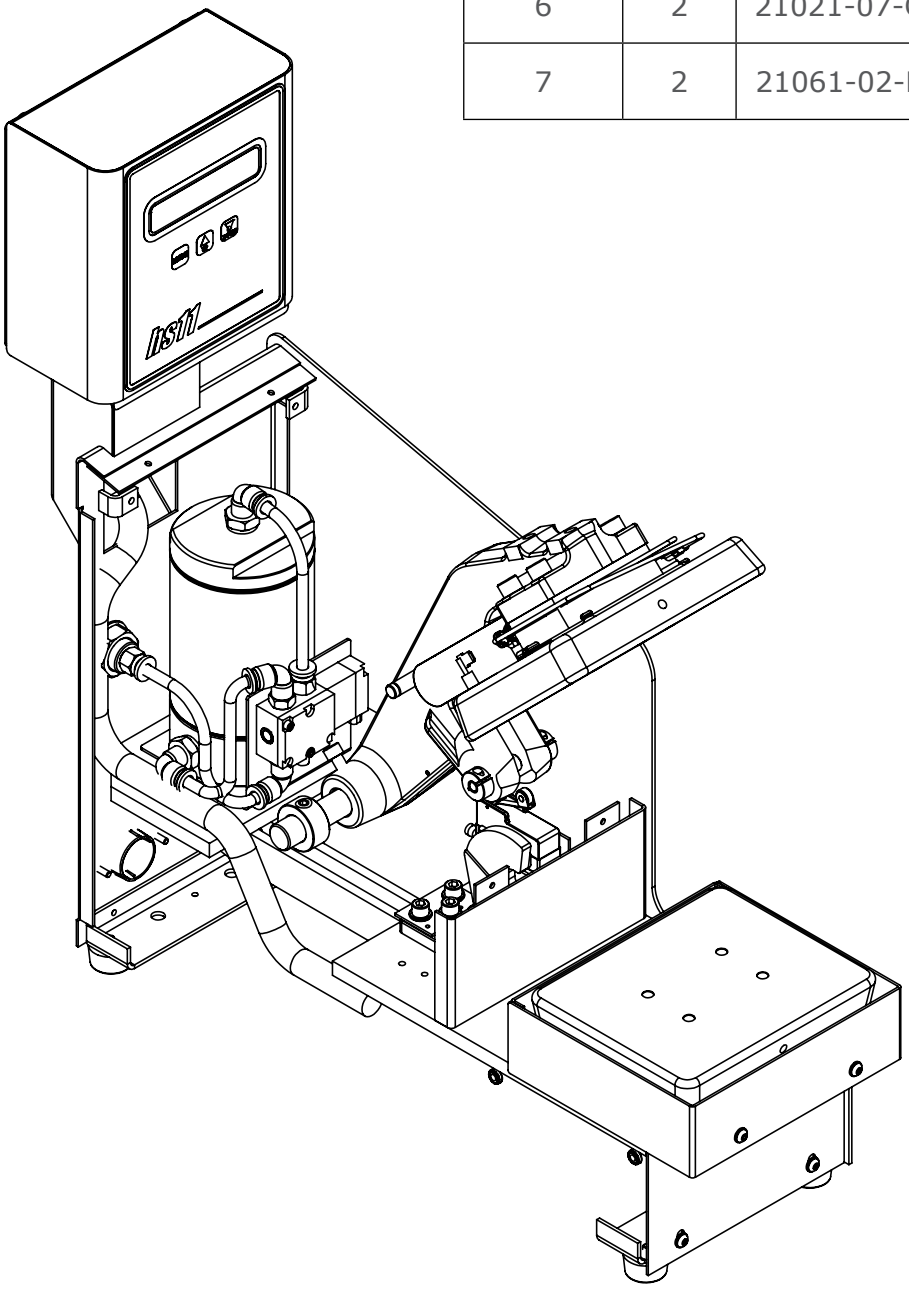


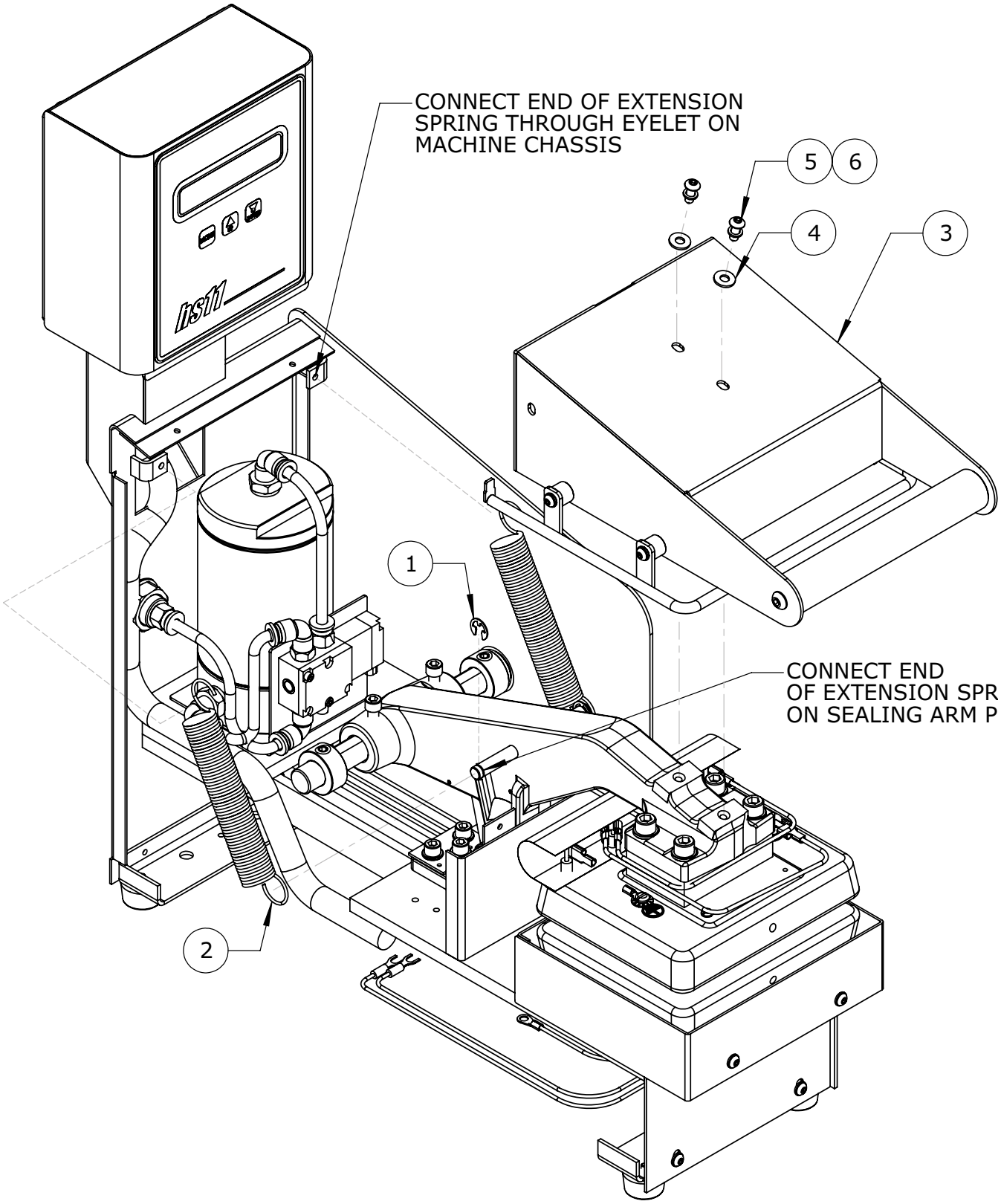


ELECTRONICS BOX, COVERS AND CHASSIS ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	46566	ASSEMBLY, LCD/ ELECTRONICS BOX
2	1	42598	WELDMENT, ASSEMBLY, FRONT COVER
3	6	21021-06-A	LOCKWASHER, #8 INTERNAL TOOTH
4	6	21029-48	#8 - 32UNC x 3/8" LG. BUT. HD. SOC. HEX
5	1	46577	WELDMENT, ASSEMBLY, LOWER HEATER GUARD
6	2	21021-07-C	LOCKWASHER, #10 HELICAL SPRING
7	2	21061-02-E	#10 - 32UNF x 3/8" LG. BUT. HD. SOC. HEX

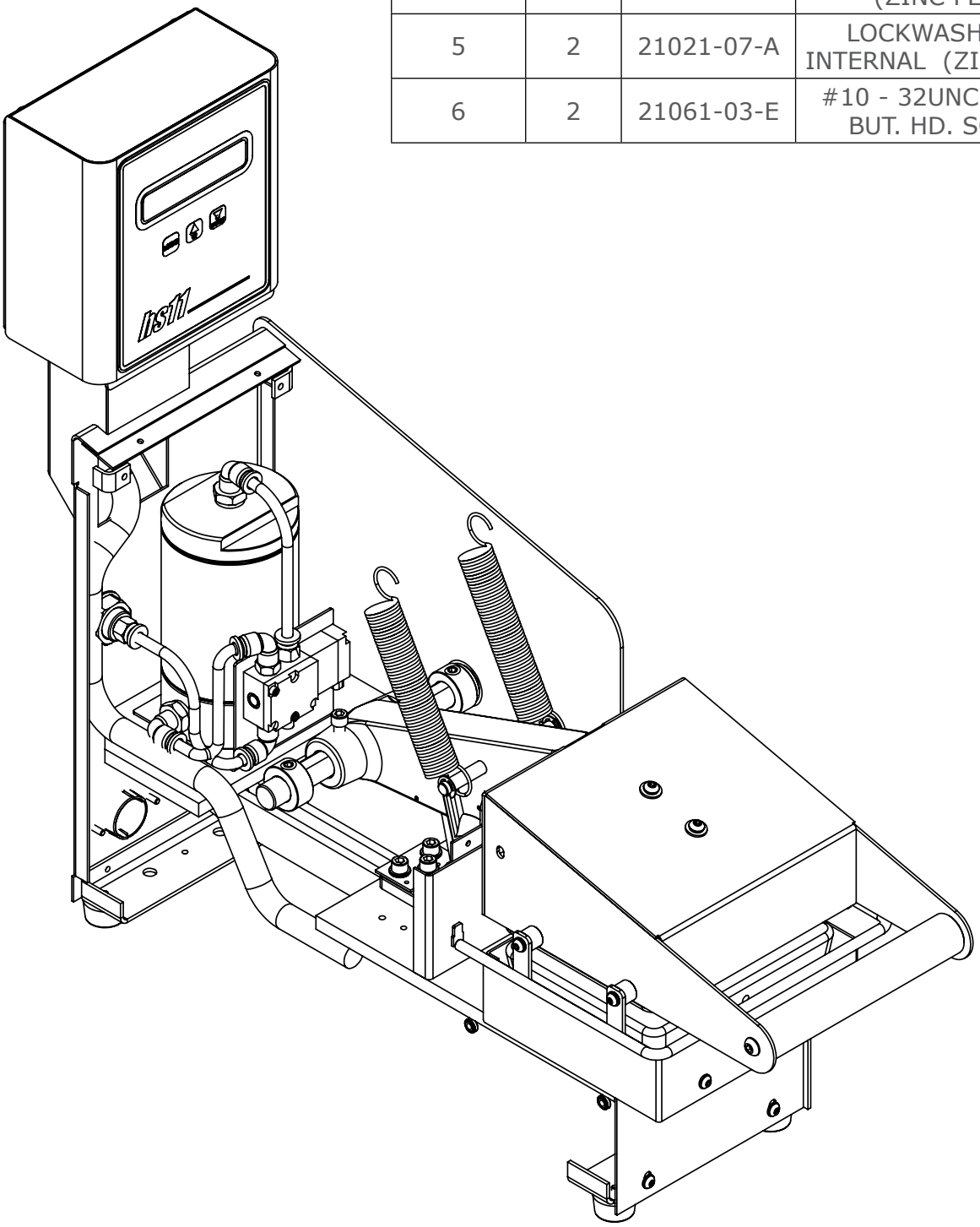


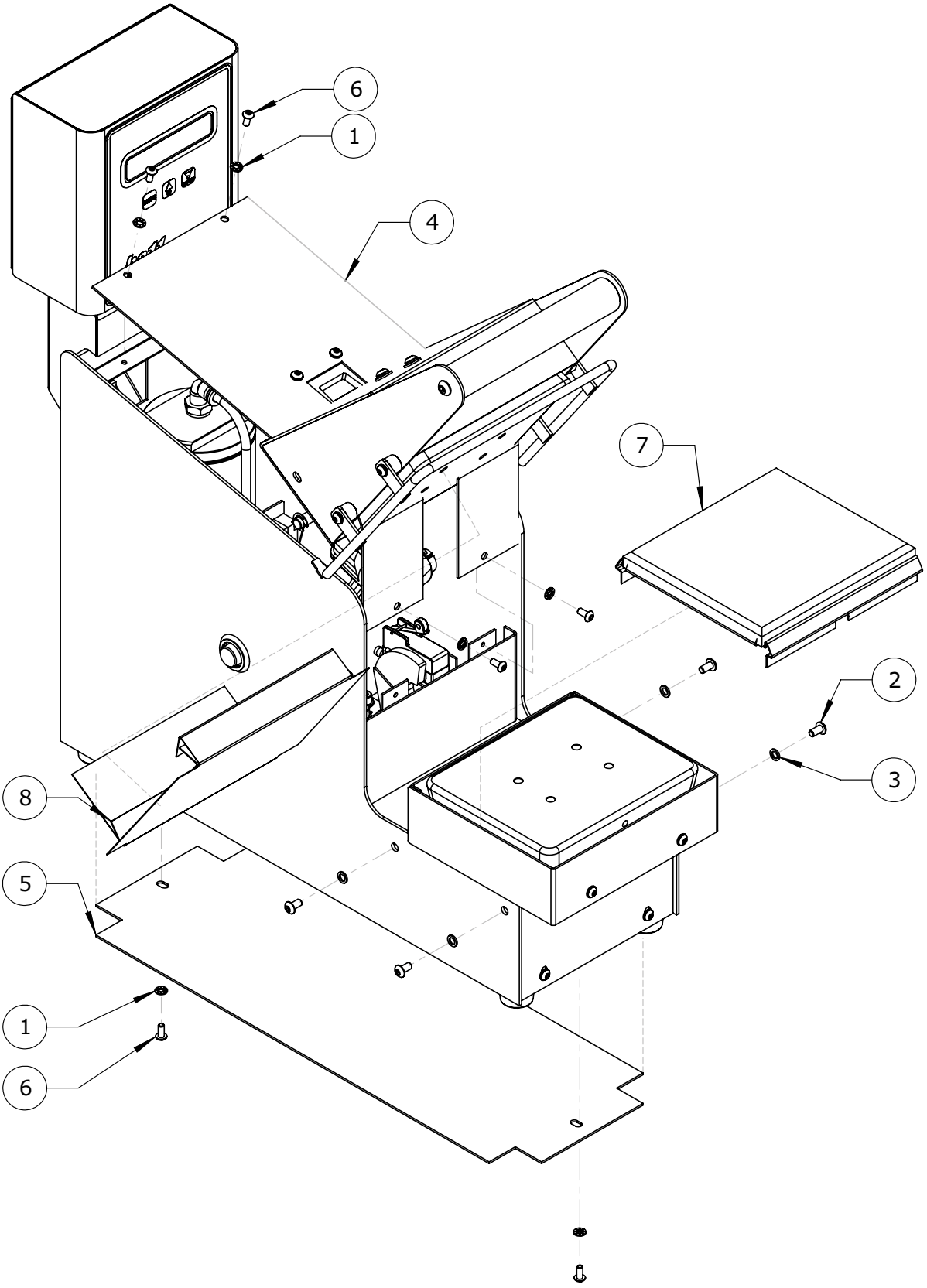


UPPER SEALING IRON COVER, SEALING ARM SPRINGS AND CHASSIS ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	D-9704	RETAINING RING, SNAP 'E' Ø.250
2	2	24080-23	SPRING, EXTENSION, Ø.069 MUSIC WIRE
3	1	Assem6	ASSEMBLY, UPPER HEATER IRON COVER
4	2	21023-01-A	WASHER, FLAT, #10 (ZINC PLATED)
5	2	21021-07-A	LOCKWASHER, #10 INTERNAL (ZINC PLATED)
6	2	21061-03-E	#10 - 32UNC x .50" LG. BUT. HD. SOC. HEX

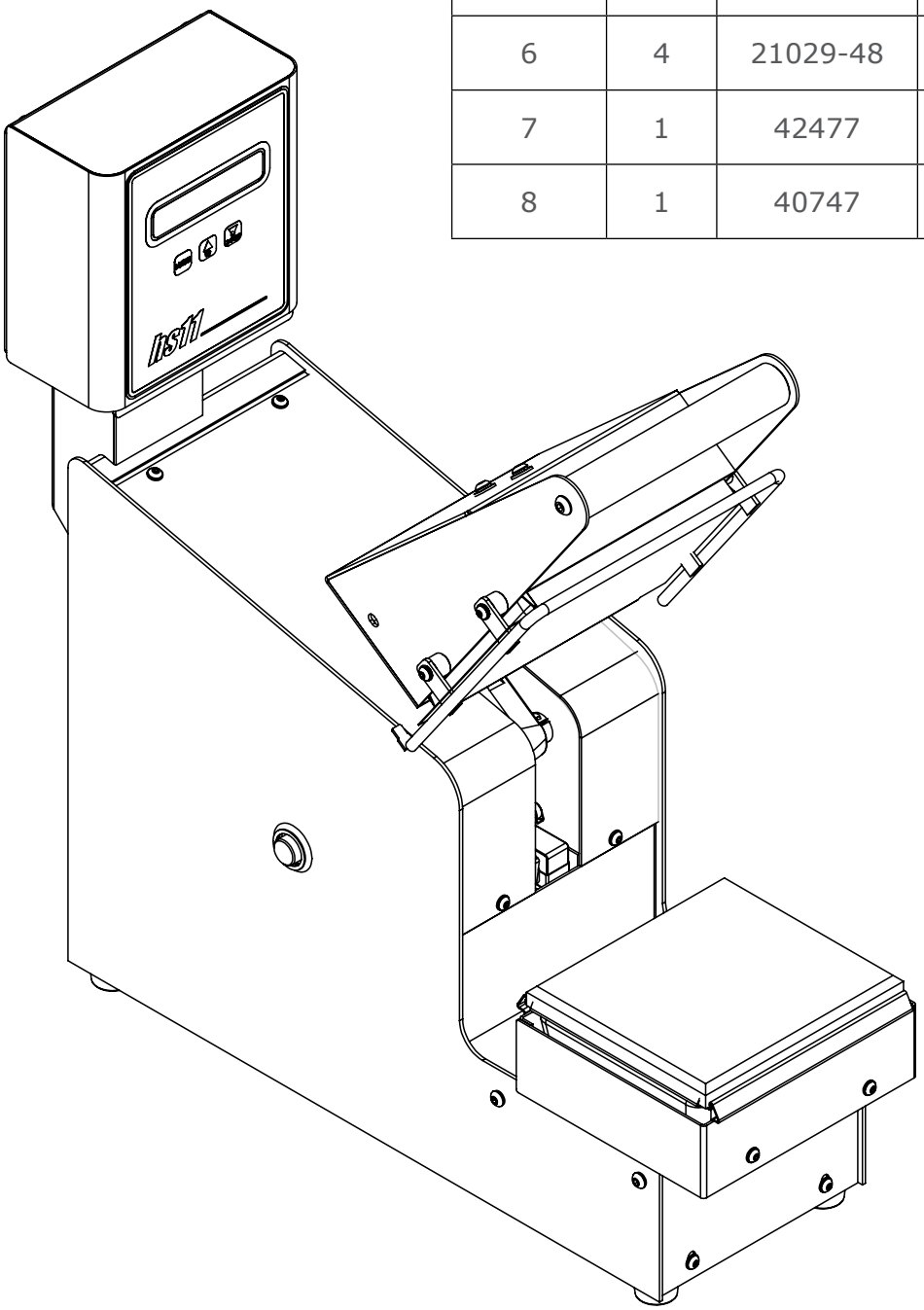


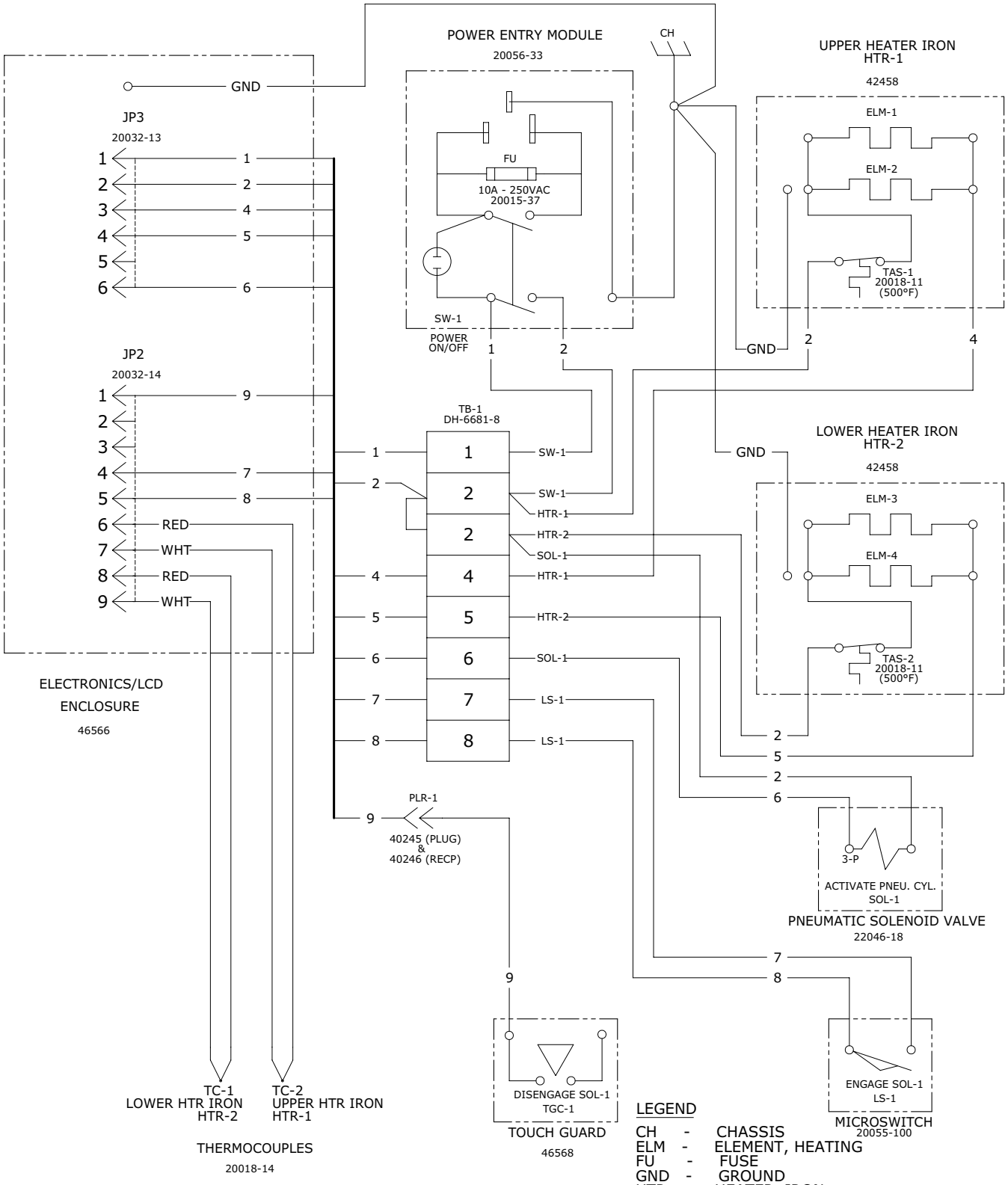


TOP AND BOTTOM MACHINE COVER INSTALLATION,
UPPER TEFLON SHIELD AND LOWER SEALING PADS

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	4	21021-06-A	LOCKWASHER, #8 INTERNAL TOOTH
2	4	21061-02-E	#10 - 32UNF x 3/8" LG. BUT. HD. SOC. HEX
3	4	21021-07-A	LOCKWASHER, #10 INTERNAL (ZINC PLATED)
4	1	42344	ASSEMBLY, COVER, TOP MACHINE CHASSIS, CUST. SERVICE
5	1	42457	COVER, BOTTOM, MACHINE CHASSIS
6	4	21029-48	#8 - 32UNC - 3/8" LG. BUT. HD. SOC. HEX
7	1	42477	ASSEMBLY, LOWER SEALING PAD
8	1	40747	ASSEMBLY, UPPER TEFLON SHIELD





ELECTRICAL SCHEMATIC - 110v

REV. 240209 #46589

LEGEND

CH	-	CHASSIS
ELM	-	ELEMENT, HEATING
FU	-	FUSE
GND	-	GROUND
HTR	-	HEATER, IRON
JP	-	CONNECTOR, JUNCTION PLUG
LS	-	LIMIT SWITCH
PLR	-	CONNECTOR, PLUG & RECEPTACLE
SOL	-	SOLENOID, PNEUMATIC
SW	-	SWITCH
TAS	-	THERMOFUSE (HIGH LIMIT)
TB	-	TERMINAL BLOCK
TC	-	THERMOCOUPLE
TGC	-	TOUCH GUARD CIRCUIT

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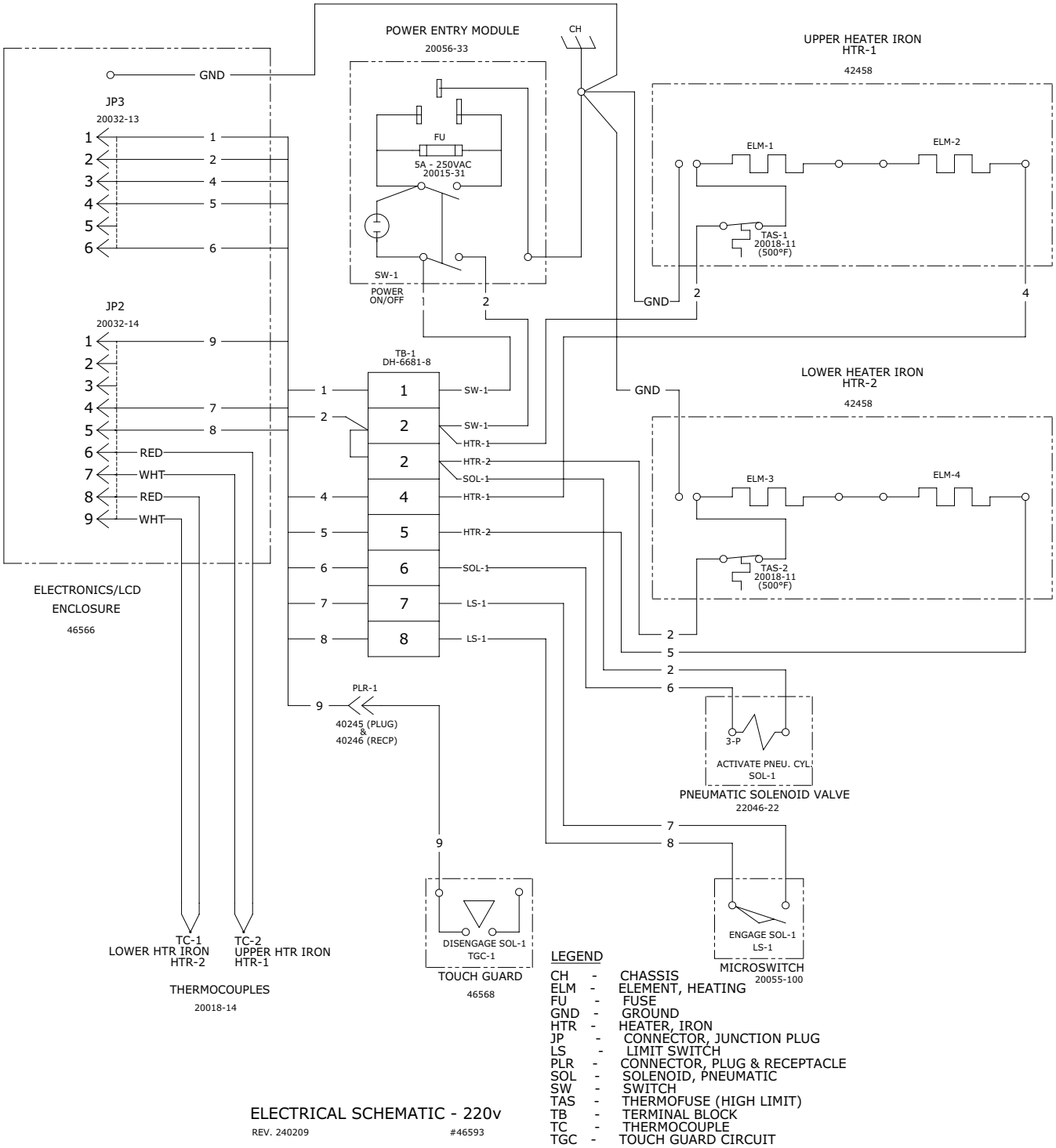

ELECTRICAL SCHEMATIC - 220v

REV. 240209 #46593

LEGEND

CH	-	CHASSIS
ELM	-	ELEMENT, HEATING
FU	-	FUSE
GND	-	GROUND
HTR	-	HEATER, IRON
JP	-	CONNECTOR, JUNCTION PLUG
LS	-	LIMIT SWITCH
PLR	-	CONNECTOR, PLUG & RECEPTACLE
SOL	-	SOLENOID, PNEUMATIC
SW	-	SWITCH
TAS	-	THERMOFUSE (HIGH LIMIT)
TB	-	TERMINAL BLOCK
TC	-	THERMOCOUPLE
TGC	-	TOUCH GUARD CIRCUIT

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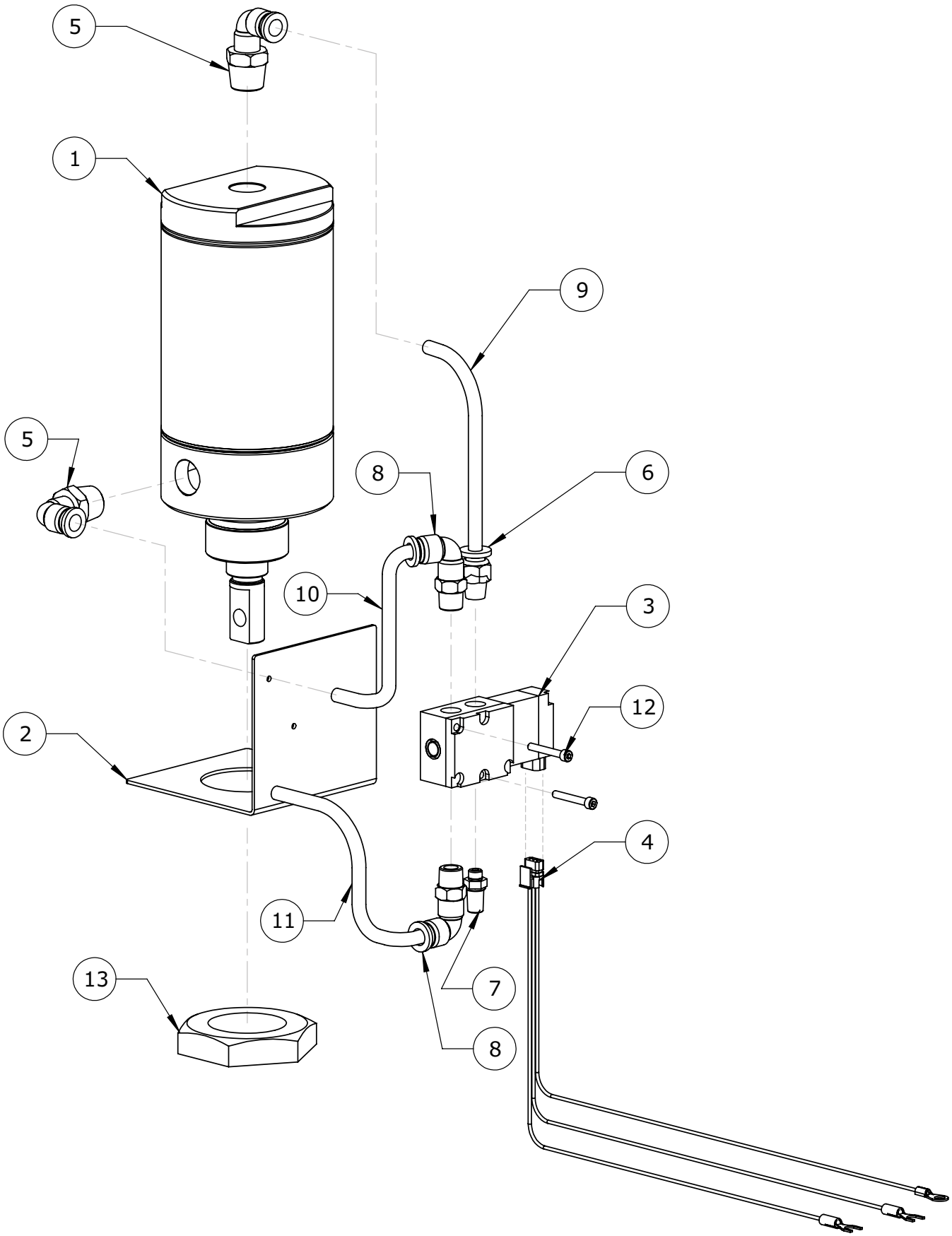
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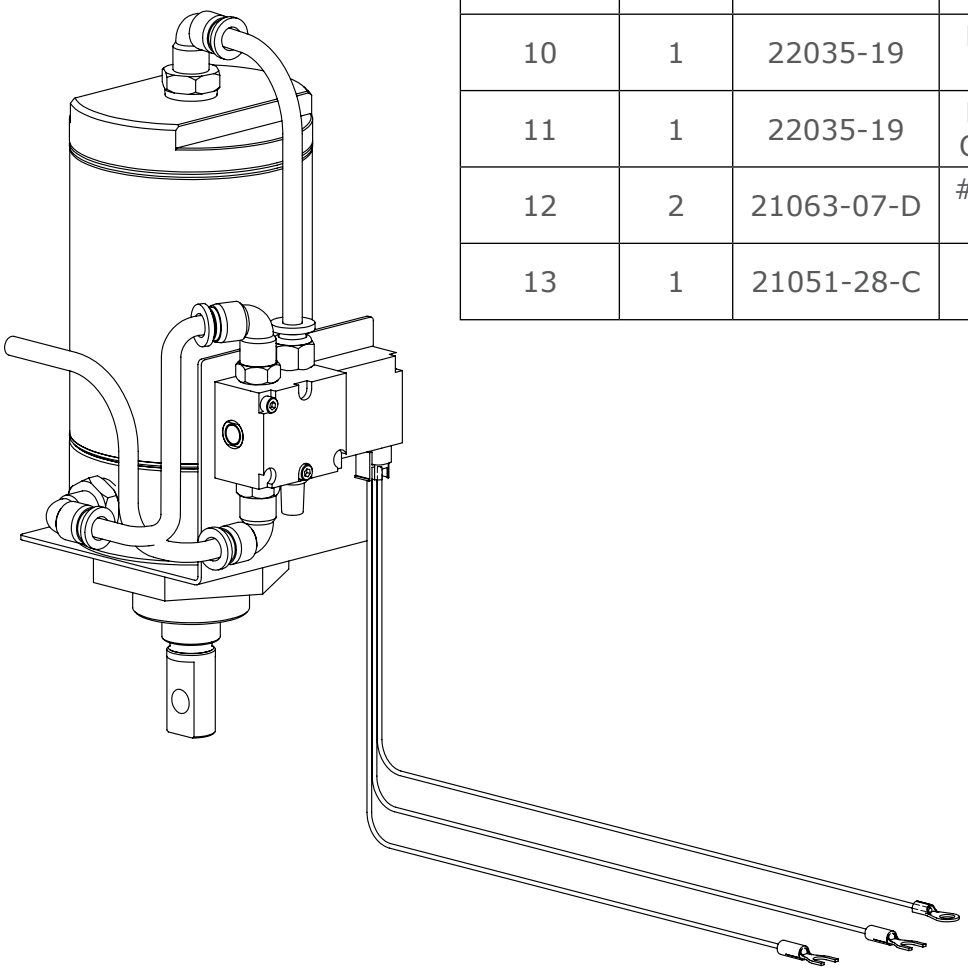
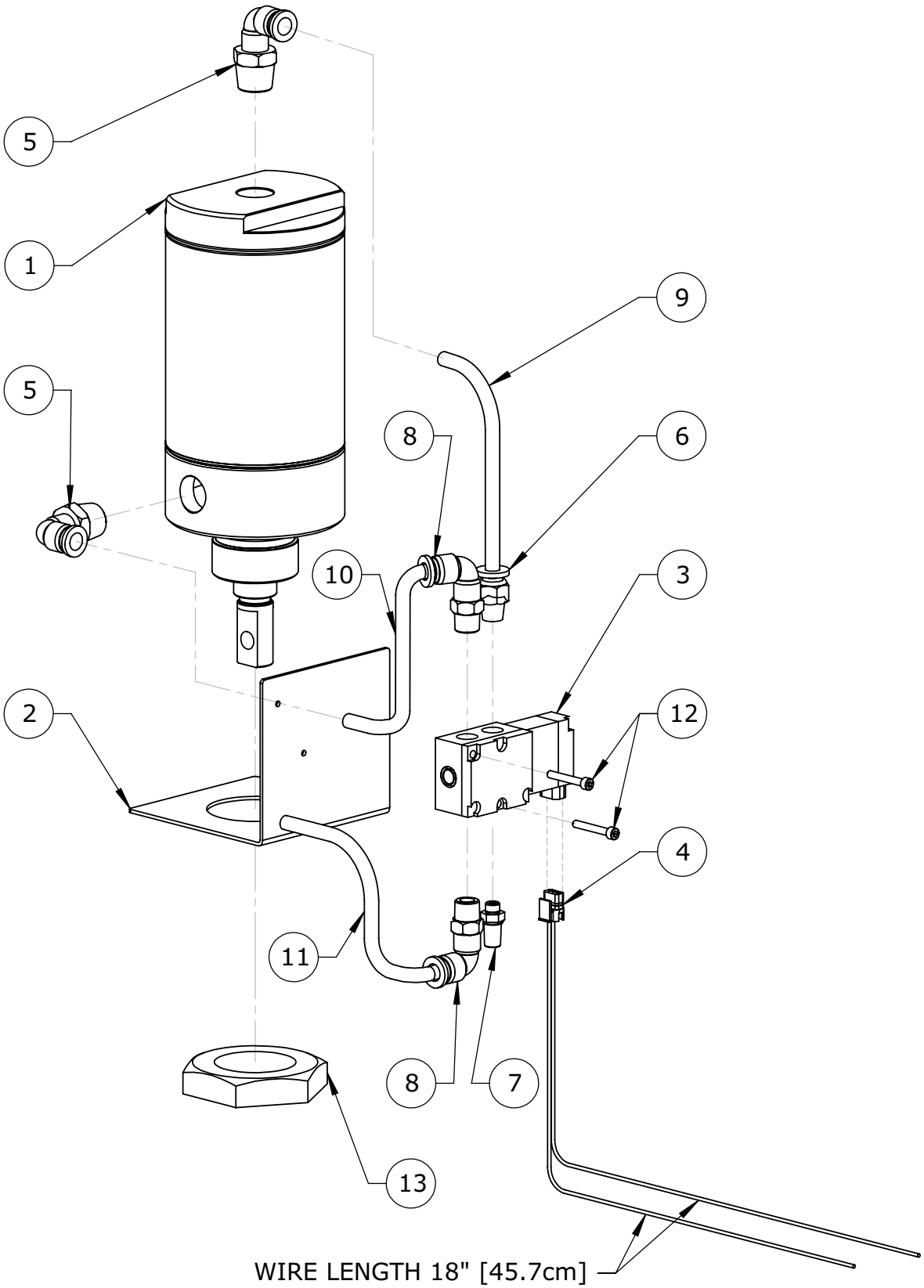
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42319	PNEUMATIC CYLINDER, SEAL ARM
2	1	46551	MOUNTING BRACKET, SOLENOID VALVE
3	1	22046-18	SOLENOID VALVE, 4-WAY 110/50-120/60 VAC
4	1	46569	WIRE ASSEMBLY, MAC JACK
5	2	22015-38	PNEUMATIC FITTING, 90° ELBOW, ¼" TUBE x 3/8" MNPT
6	1	22005-57	PNEUMATIC FITTING, STRAIGHT, ¼" TUBE x 1/8" MNPT
7	1	22046-20	PNEUMATIC MUFFLER, BRASS, #10-32UNC
8	2	22015-39	PNEUMATIC FITTING, 90° ELBOW, ¼" TUBE x 1/8" MNPT
9	1	22035-19	PNEUMATIC TUBING, ¼" O.D. x 6" LONG, BLACK
10	1	22035-19	PNEUMATIC TUBING, ¼" O.D. x 6" LONG, BLACK
11	1	22035-19	PNEUMATIC TUBING, ¼" O.D. x 7.5" LONG, BLACK
12	2	21063-07-D	#5 – 40UNC x 7/8" LONG, SOC. HEX CAP SCREW
13	1	21051-28-C	HEX NUT, CYLINDER MOUNTINGF

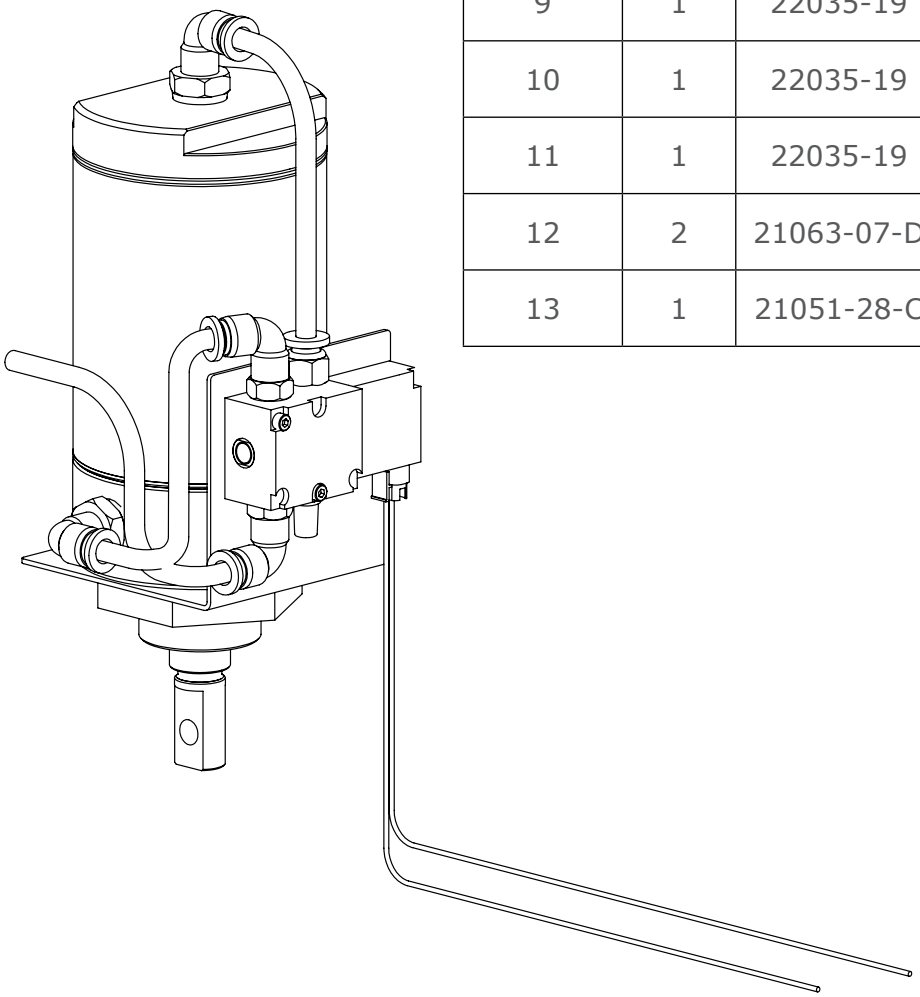


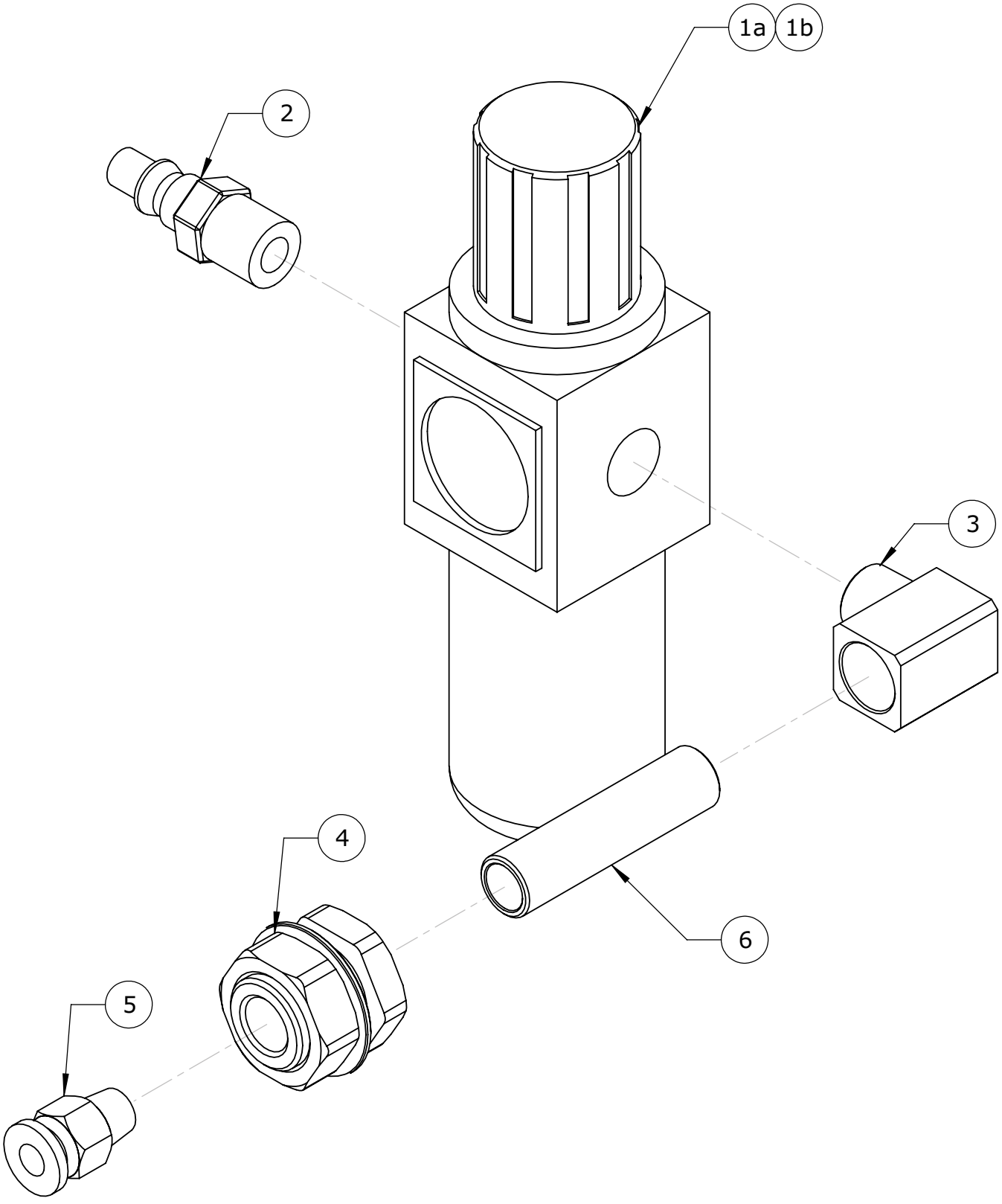


PNEUMATIC SEAL CYLINDER ASSEMBLY - 230 volt

REV 031209

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42319	PNEUMATIC CYLINDER, SEAL ARM
2	1	46551	MOUNTING BRACKET, SOLENOID VALVE
3	1	22046-22	SOLENOID VALVE, 4-WAY 24 VOLT DIRECT CURRENT
4	1	47086	WIRE ASSEMBLY, MAC JACK
5	2	22015-38	PNEUMATIC FITTING, 90° ELBOW, ¼" TUBE x 3/8" MNPT
6	1	22005-57	PNEUMATIC FITTING, STRAIGHT, ¼" TUBE x 1/8" MNPT
7	1	22046-20	PNEUMATIC MUFFLER, BRASS, #10-32UNC
8	2	22015-39	PNEUMATIC FITTING, 90° ELBOW, ¼" TUBE x 1/8" MNPT
9	1	22035-19	PNEUMATIC TUBING, ¼" O.D. x 6" LONG, BLACK
10	1	22035-19	PNEUMATIC TUBING, ¼" O.D. x 6" LONG, BLACK
11	1	22035-19	PNEUMATIC TUBING, ¼" O.D. x 7.5" LONG, BLACK
12	2	21063-07-D	#5 – 40UNC x 7/8" LONG, SOC. HEX CAP SCREW
13	1	21051-28-C	HEX NUT, CYLINDER MOUNTINGF

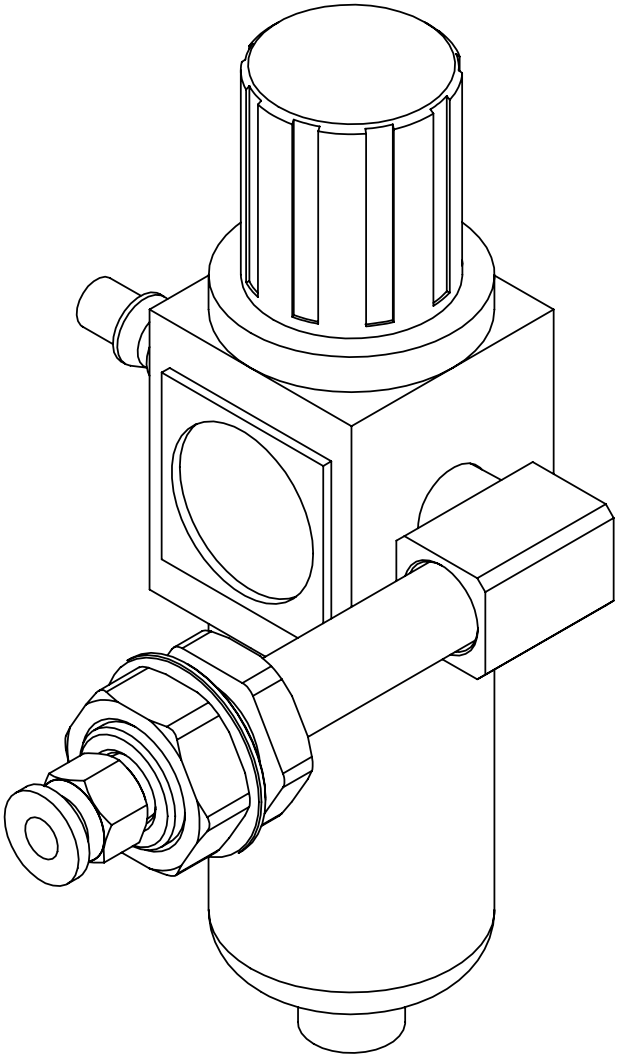


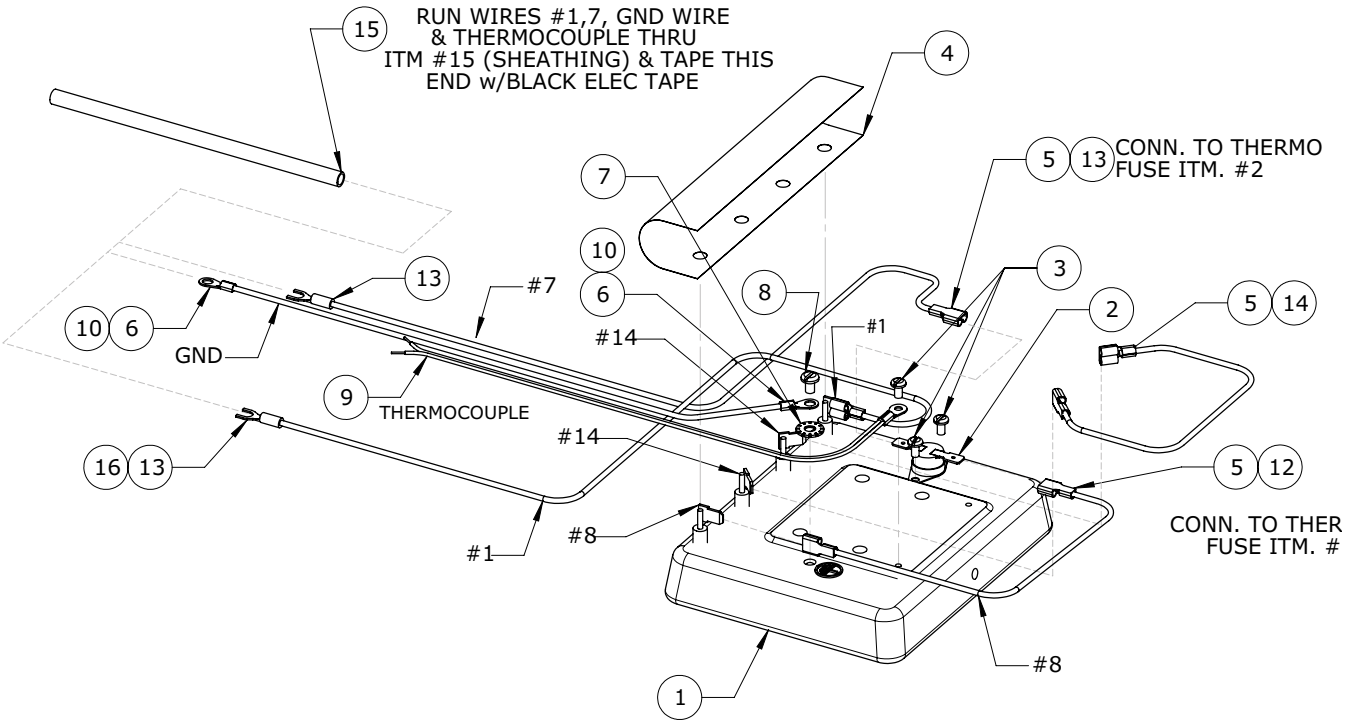


AIR FILTER PRESSURE REGULATOR ASSEMBLY

REV. 080103

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1a	1	22045-91	AIR FILTER PRESSURE REGULATOR GAUGE, (0 – 120 PSI)
1b	1	22045-94	AIR FILTER PRESSURE REGULATOR GAUGE, (0 – 10 BARS)
2	1	DH-6797	HOSE ADAPTER
3	1	22015-40	STREET ELBOW, 90°, ¼" MNPT x ¼" FNPT
4	1	22030-67	BULKHEAD FITTING, ¼" FNPT x ¼" FNPT
5	1	22005-58	PNEUMATIC STRAIGHT FITTING, ¼" TUBE x ¼" MNPT
6	1	DH6766	BRASS NIPPLE FITTING, ¼" MNPT x ¼" MNPT





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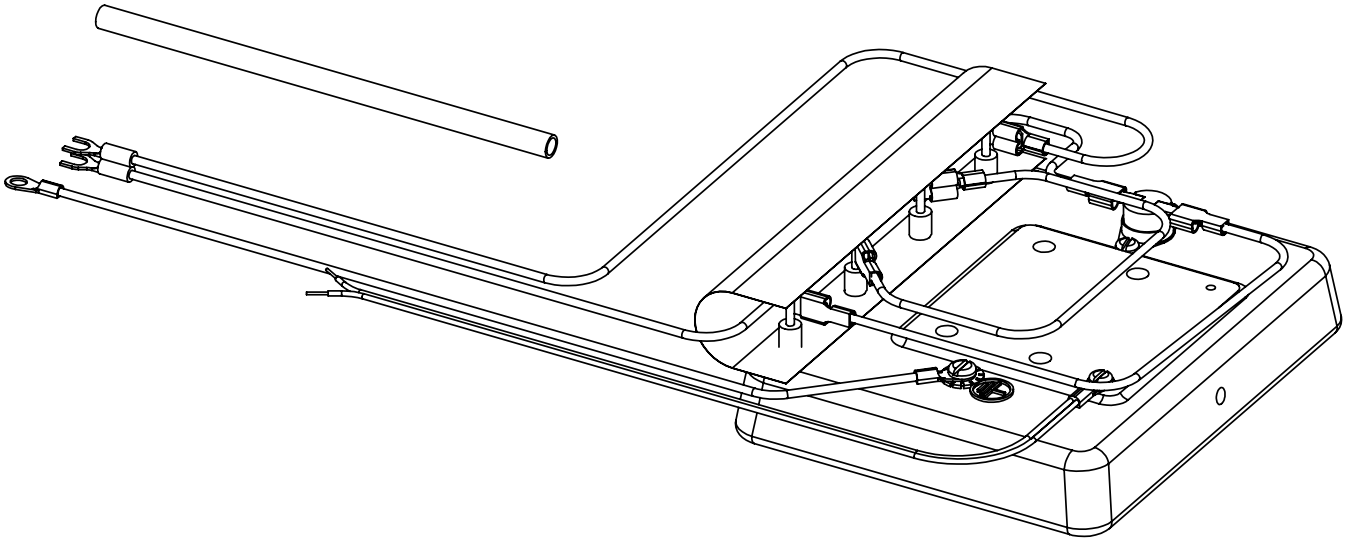
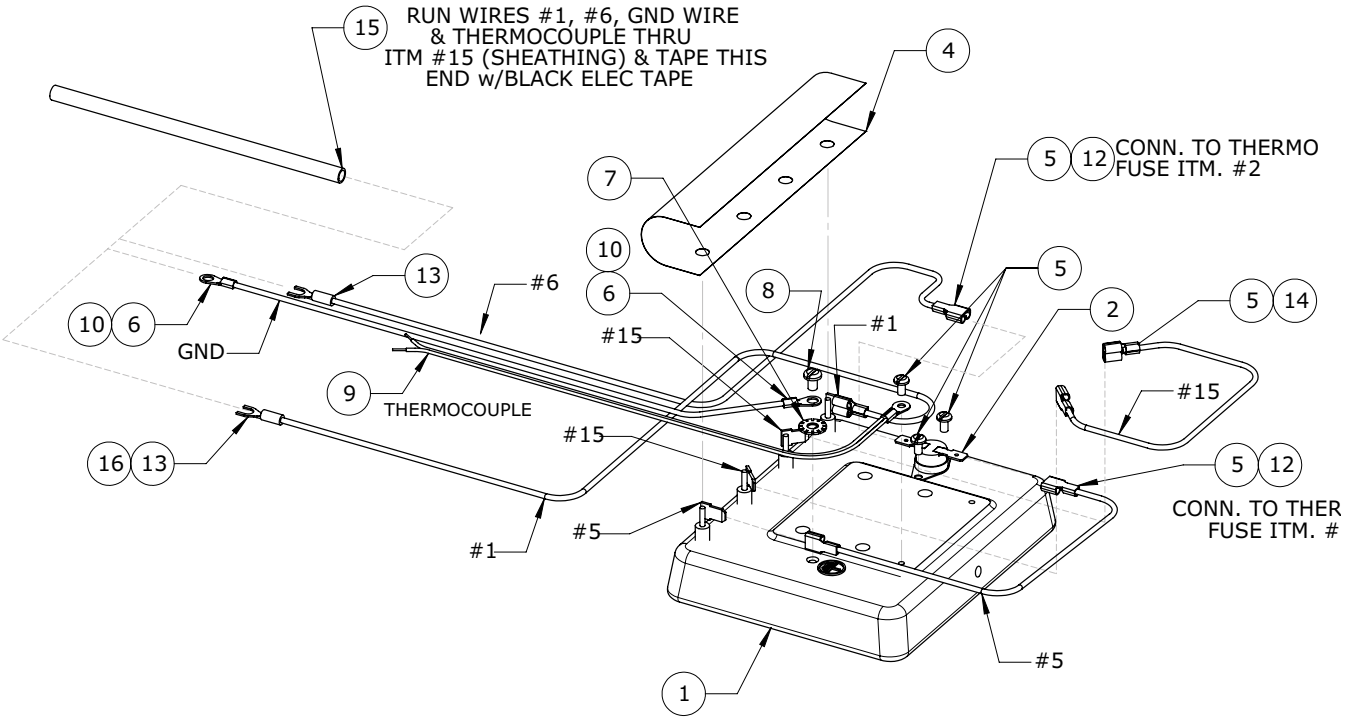
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42458	IRON, SEALING
2	1	20018-11	THERMO FUSE, (500° F)
3	3	21069-03-E	PHSS #6-32UNC x ¼" STN. STL.
4	1	41717	SHIELD, TEFLON
5	6	20003-20	¼" PUSH ON CONNECTOR
6	2	20003-45	RING TERMINAL, #8 NON-INSULATED
7	1	21021-06-B	LOCKWASHER EXT. TOOTH #8
8	1	21069-03-F	PHSS #8-32UNC x ¼" STN. STL.
9	1	20018-14	THERMOCOUPLE, 'J' SERIES 36" LONG
10	1	23001-15	GROUND WIRE, 16 Ga. GREEN/YELLOW 12" LONG
11	1	23001-23	WIRE #8 16Ga. 8-1/2" WHITE
12	1	23001-23	WIRE #7, 16Ga. 17" WHITE
13	2	D-3128	SPADE CONNECTOR, #6 STUD
14	1	23001-23	WIRE #14, 16 Ga. 10" WHITE
15	1	DH-6634	SHEATHING, FIBERGLASS, 6" LG.
16	1	23001-23	WIRE #1, 16 Ga. 21" WHITE





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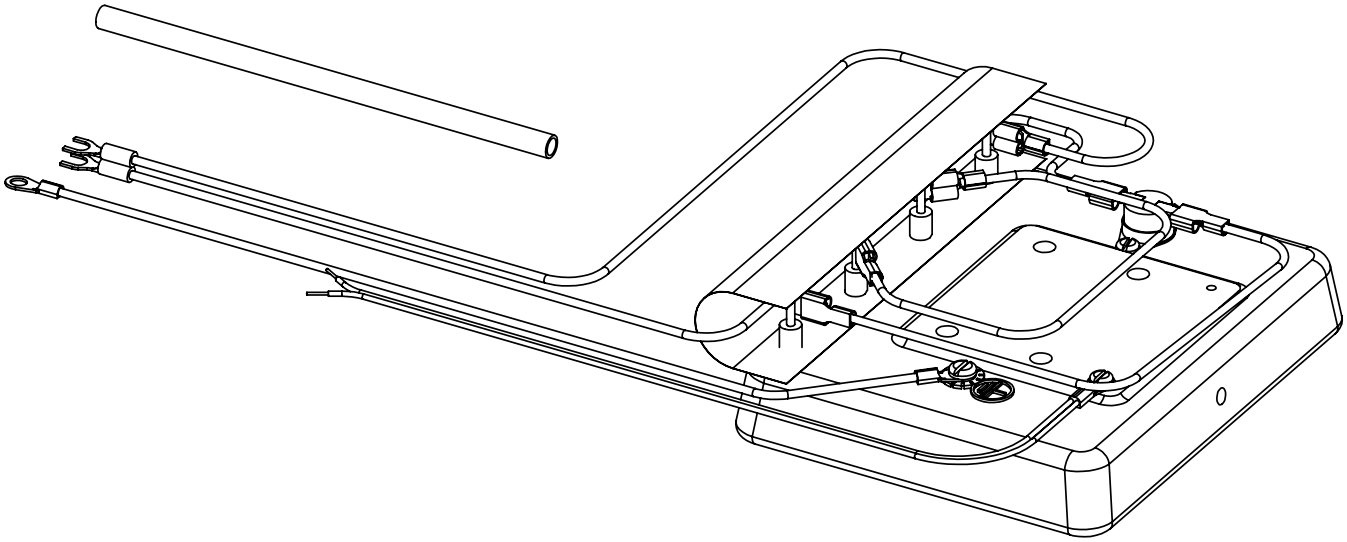
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	42458	IRON, SEALING
2	1	20018-11	THERMO FUSE, (500° F)
3	3	21069-03-E	PHSS #6-32UNC x ¼" STN. STL.
4	1	41717	SHIELD, TEFLON
5	6	20003-20	¼" PUSH ON CONNECTOR
6	2	20003-45	RING TERMINAL, #8 NON-INSULATED
7	1	21021-06-B	LOCKWASHER EXT. TOOTH #8
8	1	21069-03-F	PHSS #8-32UNC x ¼" STN. STL.
9	1	20018-14	THERMOCOUPLE, 'J' SERIES 36" LONG
10	1	23001-15	GROUND WIRE, 16 Ga. GREEN/YELLOW 12" LONG
11	1	23001-23	WIRE #5 16Ga. 8-1/2" WHITE
12	1	23001-23	WIRE #6, 16Ga. 26" WHITE
13	2	D-3128	SPADE CONNECTOR, #6 STUD
14	1	23001-23	WIRE #15, 16 Ga. 10" WHITE
15	1	DH-6634	SHEATHING, FIBERGLASS, 15" LG.
16	1	23001-23	WIRE #1, 16 Ga. 40" WHITE



Customer Service

Thermopatch Corporation's U.S. and International network of sales representatives, as well as its internal Customer Service Department, offer their assistance in the development of effective heat-seal mending, marking, and identification programs.

Thermopatch markets a complete line of heat-seal and marking machines, as well as a complete line of materials and supplies.

Label Printing Machines – manual, automatic, and computer-controlled.

Marking Machines – high-speed permanent imprinting of decorative or informative marks on most woven fabrics.

Heat-Seal Machines – manual, semi-automatic, and fully automatic, with high inter-platen pressure to assure excellent adhesion of label tapes and mending materials.

Mending Materials – hundreds of weights, colors, weaves, and fibers to match most industrial and institutional fabrics.

Label Tapes – specially woven 100% cotton and blends with adhesives to match specific processing requirements.

Emblems – high quality blank emblems with screen print or merrowed borders.

Hot Paper Transfers – in sizes from 1 to 100 square inches in rolls or cut and stacked. Custom or stock designs in one to four colors.

When ordering machine parts, please include the model and serial number of the equipment.

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